

-HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY-

Exhibit 1

FILED UNDER SEAL

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK**

SPECTRUM DYNAMICS MEDICAL LIMITED

Plaintiff,

V.

GENERAL ELECTRIC COMPANY, GE
HEALTHCARE, INC., GE MEDICAL SYSTEMS
ISRAEL LTD., JEAN-PAUL BOUHNİK,
SERGIO STEINFELD, ARIE ESHCO, NATHAN
HERMONY, and YARON HEFETZ,

Defendants.

Case No.: 18-cv-11386 (VSB)

HIGHLY CONFIDENTIAL –
ATTORNEYS' EYES ONLY

DECLARATION OF SCOTT D. METZLER, PH.D.
IN SUPPORT OF PLAINTIFF SPECTRUM DYNAMICS MEDICAL LIMITED’S
MOTION FOR PRELIMINARY INJUNCTION

I, Scott D. Metzler, Ph.D., declare as follows:

1. I have been retained by Plaintiff, Spectrum Dynamics Medical Limited (“Spectrum”) in the above captioned action (“the Action”) against the defendants, which I shall collectively refer to as “GE” herein, to provide technical assistance and advice and to testify, if needed as an expert witness.

2. I am being compensated by Spectrum at a rate of \$500 per hour. I have not testified at trial or by deposition in any cases during the previous four years. My conclusions and opinions are my own and are not affected by my compensation. My compensation is not contingent upon the results of my work or the outcome of the litigation.

BACKGROUND AND QUALIFICATIONS

3. My education and experience are set forth in my CV (Ex. 7). I note the following having particular relevance for my expertise in this case. In 1992, I completed my undergraduate studies in the Scholar's Program of the Pennsylvania State University, graduating with a Bachelor's of Science in Physics with honors in Physics and a minor in Mathematics. I then attended the University of Pennsylvania, attaining a Ph.D. in Physics. I then joined the Department of Physics at the California Institute of Technology as a Postdoctoral Scholar and, later, Senior Postdoctoral Scholar. In 2000, I switched fields into medical imaging as a Research Associate at Duke University's Radiology Department. I was promoted to Research Assistant Professor in 2002 and then switched to University of Pennsylvania's Department of Radiology in 2004 as a Research Assistant Professor. I am currently a Research Professor of Radiology at University of Pennsylvania.

4. Since 2000, my focus has been on Single Photon Emission Computed Tomography (SPECT) imaging. I have substantial experience in software, both previous to this field, where I helped write the online system for a high-energy physics experiment at Stanford Linear Accelerator Center (1997-2000), and within this field, where I have written extensive software for analysis, reconstruction, and simulations. I have substantial experience with collimator design and characterization; I have peer-reviewed publications about the characterization and use of pinhole, slit-slat, slit-slit, and multi-channel collimation, which includes fan-beam, cone-beam, and parallel-beam, since parallel-beam is the limiting case of fan-beam and cone-beam with infinite focal lengths. I am familiar with detector technologies used in SPECT imaging. For example, one of my current projects uses Photomultiplier Tubes (PMTs) with a sodium-iodide (NaI) scintillator, whereas another uses solid-state CZT detectors. I am also familiar with system issues as I am the

Principal Investigator (PI) on a project to develop a research cardiac SPECT system for human imaging. My work in these areas spans from small-animal imaging to human imaging. Another area of my work has been on sampling patterns and reconstruction; in 2019, I was the general chair of the 15th International Meeting on Fully Three Dimensional Image Reconstruction, held in Philadelphia, PA. My work has been recognized by the National Institutes of Health with nine grants where I am or have been the PI and two as co-PI. In 2020, I received the Distinguished Investigator Award from The Academy for Radiology & Biomedical Imaging Research.

WHAT I HAVE BEEN ASKED TO DO

5. I have been asked to study documents produced by both Spectrum and Defendants and provide my opinions, and assist in evaluating whether GE used Spectrum's confidential information to engineer and develop its StarGuide system.

6. In reaching the conclusions here, I have relied upon the documents identified in this Declaration, which I understand have been marked with the same Exhibit numbers used in the papers filed with the Court. My review is ongoing and I reserve the right to modify my opinions in view of new information that comes to light.

7. I understand that General Electric engaged in a due-diligence process with Spectrum under a 2009 non-disclosure agreement ("2009 Agreement") (Ex. 8) for the purpose of

[REDACTED]
[REDACTED] individually swiveling
columns [REDACTED]
[REDACTED]

TECHNOLOGY AT ISSUE

8. Nuclear imaging, sometimes called molecular imaging, begins with a carrier molecule that bonds (is tagged) with a radioactive isotope to create a nuclear-medicine tracer. The carrier molecule typically transports the isotope to a specific organ or tissue in the human body so that it accumulates in that specific tissue or organ of interest (like the brain or the heart). The isotope decays and the emitted radiation can be detected by proper imaging devices, such as the SPECT devices at issue in this case, to create an image of the tracer distribution.

9. Conventional SPECT cameras have been sold for many years and typically include large detector panels (shown below), which were designed to acquire a two-dimensional (2D) image of a full body section. The detector panels were designed to orbit around the patient's body so that they could collect a series of 2D images to recreate a three-dimensional (3D) image.



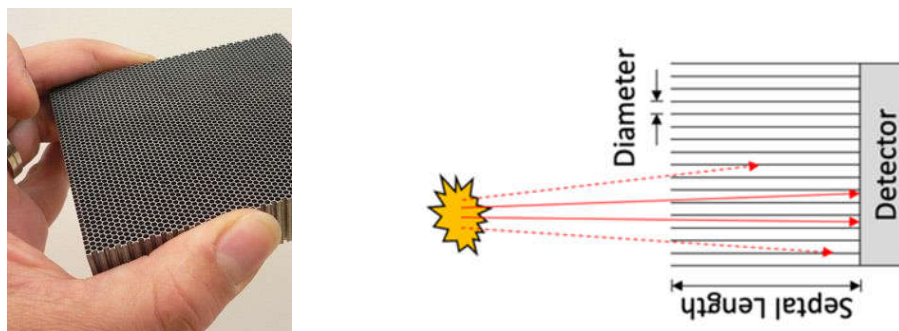
10. SPECT isotopes emit a single photon during their decay. If a detector is placed nearby and observes an emitted photon, it can measure the energy – to verify that it is un-scattered – but little else about the photon is known. Neither the origin nor the direction of the photon is known. While the origin is unknowable, the use of a collimator with the detector can determine the line of the photon; the photon's origin is a point on that line.

11. A detector panel includes a detector crystal (or scintillator) and a collimator.

12. Regarding the detector crystal, conventional SPECT cameras use indirect gamma conversion with Sodium Iodide (NaI) as the material that scintillates when “hit” by gamma rays

and generates visible light, which is converted into an electric signal through readout electronics, typically Photomultiplier Tubes (PMTs). In 2007, Spectrum introduced, with its cardiac imager D-SPECT®, a new generation of clinical scanners using Cadmium Zinc Telluride (“CZT”) detectors that convert the gamma rays directly into an electrical signal without the need for bulky PMTs.

13. Regarding the collimator, it is a type of “lens” for gamma rays and it is installed between the patient’s body and the detector. Typically, collimators are made of lead, but, as will be discussed here, Spectrum introduced a collimator made of tungsten. Collimators are typically designed in a hexagonal pattern with channels (or holes) that permit those gamma rays that are nearly parallel to the collimator channels to reach the detector crystal. The walls of the channels are called “septa” with the channel “diameter” representing the aperture size and the “septal length” representing the channel length. To clarify, if the collimator were formed by drilling holes in a lead block, the “diameter” would be the diameter of the bit and the “septal length” would be the bore length or block thickness. A photograph of a collimator made from lead foils and a schematic diagram are shown below, where the solid red lines represent photons passing through the collimator and the dashed lines are absorbed by the septa:



14. Tradeoffs are inherent in designing a SPECT collimator. I view the tradeoffs as forming a triangle of options. The corners of that triangle are resolution, sensitivity (synonymous with efficiency), and Field of View (FOV), where FOV is the portion of the object that a camera

sees. One can improve resolution by making the holes smaller (or septa longer); this comes at the expense of sensitivity. One can improve sensitivity by orienting the holes towards a closer focal line (e.g., fan-beam or cone-beam) so that more holes see the object at any given time; this comes at the price of reduced FOV. One could also simultaneously shrink the hole diameter and reduce the FOV to improve resolution while keeping sensitivity constant. Essentially, different collimator types make different choices between resolution, sensitivity, and FOV.

15. A near-universal principle of SPECT imaging is that, everything else held constant, there is better resolution for objects closer to the collimator. How quickly resolution degrades depends on the parameters of the collimator. For parallel-beam collimation, the resolution is the size of the hole diameter at the surface of the collimator; each time an object is moved farther away by one hole length, the resolution degrades by one hole diameter, which is why the ratio of the hole diameter to the hole height is very important; it is the rate of change of spatial resolution with

16. To achieve different imaging performances for different clinical protocols, conventional SPECT systems are equipped with a choice of collimators. For example, one collimator is best for “bone scan” imaging, while a different collimator is better suited for thyroid imaging. The collimators are exchanged on a per-patient basis as needed.

17. To perform a SPECT scan, the detectors, coupled with the collimators, are positioned in proximity to the patient body and will orbit around the patient from 180 up to 360 degrees to collect a series of 2D images. Because having the detectors close to the body improves

image quality, SPECT cameras are often equipped with body-contouring technology to bring the detectors close to the patient without touching the patient.

18. When a detector coupled with a collimator acquires data while in a certain position and oriented in a certain direction the result is a planer image (i.e., a 2D image formed from a 3D object), which is often called a “view”.

19. Following data acquisition, a complicated mathematical iterative algorithm creates or reconstructs a 3D image from the series of 2D images. Almost all reconstructions in modern systems are performed using iterative methods. A reconstruction can take hundreds of iterations for convergence to the best-fit distribution, but are often not run to convergence because of increasing image noise and computational cost. Iterative algorithms work by starting with an estimate of the activity distribution, typically uniform, and calculating the expected set of projection data for that distribution (this process is known as forward projection). These expected projections are compared with the actual data to estimate a correction that will yield a better correspondence to the data (this process is known as backward projection). A new iteration then begins with the forward projection of the updated activity distribution.

20. SPECT technology has many limitations, such as long scan time, poor image quality, and low energy resolution.

SPECTRUM’S D-SPECT® CARDIAC IMAGER

21. It is my understanding that the D-SPECT® was a proprietary system whose inner workings were disclosed to the public in a very limited fashion. I have not studied the extent of such disclosures and how they would impact the confidentiality of the various features, other than as noted herein.

22. D-SPECT[®] is a dedicated cardiac SPECT imager where patients sit in a chair that can recline to or near a supine position. The D-SPECT[®] was an advance for cardiac imaging beyond the conventional technology described above and included the following features: (1) 9 small detector columns disposed in a 180° L-shaped configuration; (2) the small detector columns are equipped with CZT digital detectors; [REDACTED]

[REDACTED] (4) swiveling detector motion; (5)

23. CZT was critically important to the D-SPECT[®] design because it allowed for compact detector assemblies (also known as columns), as shown in Appendix A.

24. D-SPECT[®] uses a [REDACTED] (as opposed to the typical hexagonal hole shape) such that the [REDACTED] are very unusual and they are challenging to make. I am unaware of a commercial [REDACTED] before D-SPECT[®]'s.

25. D-SPECT[®]'s collimator is [REDACTED]
[REDACTED]
[REDACTED] (Ex. 142, SDML_00733345). It is unfortunate that the term "diameter" is used in the field even in reference to [REDACTED], but it is the edge length of [REDACTED], or the diameter of the largest cylinder that would fit in the hole. D-SPECT[®]'s collimator is made from tungsten slats that have a series of slits cut approximately halfway along the hole length so that they can form a grid by interconnecting the slits, analogously to what is done in

cardboard to form dividers for bottles of wine in a case. This fabrication method makes it feasible to use [REDACTED]

26. Tungsten is more rigid than lead so that it can withstand the detector sweeping motion without deformation. It is also denser than lead so that thinner walls can be used to improve the collimator's sensitivity at the same resolution. It also has the advantage of not yielding an x-ray that interferes with thallium imaging, commonly used in cardiac imaging; lead yields such an x-ray. However, tungsten is a brittle metal with a high melting point that is challenging to machine, and essentially impossible to form through pressing techniques that are commonly used with lead [REDACTED]

27. Spectrum's design of D-SPECT[®] used multiple CZT modules abutted vertically in a column. The columns swivel for two reasons: (1) to increase the field of view since the detectors are small compared to the patient's size and (2) to improve angular sampling which is needed for reconstruction. The compact size of the swiveling columns allows them to be packed close to each other so that more detectors can see the heart simultaneously. (Appendix A).

28. In most SPECT scanners, the detectors rotate through either 180° or 360° and spend the same amount of time at each view and use the same angular step between views. D-SPECT[®]'s system [REDACTED]

[REDACTED] Spectrum's acquisition algorithm for determining the scanning steps [REDACTED]

[REDACTED] Ex. 143, SDML_00015221-22, Ex. 45 at GE_SDM_00297206-07 (Ex. 45 [REDACTED])

[REDACTED] Focused (or focal) imaging [REDACTED]

allows D-SPECT® to obtain very good sensitivity for photons coming from the heart while using a small detector.

29. D-SPECT® uses a proprietary version of a commonly used iterative reconstruction algorithm, known as [REDACTED] or [REDACTED] D-SPECT®'s version (i) [REDACTED] (Ex. 144 (SDML_00009898-9903), Ex. 45 at GE_SDM_00297208-7213) and (ii) used a [REDACTED] for the heart (Ex. 145 at GE_SDM_00392951). [REDACTED] (Ex. 45 at GE_SDM_00297222, GE_SDM_00297219-7221, GE_SDM_00297214-7218, GE_SDM_00297202-7205, GE_SDM_00297195-7201, and GE_SDM_00297179-7184.).

GE'S NM530C CARDIAC IMAGER AND PRIOR GPC SCANNERS

30. A photograph of GE's NM 530c (reproduced from SDML_00328143) is shown in Appendix B. The GE NM 530c uses stationary detectors and pinhole collimators, which have been used in gamma imaging since at least the 1940s and in SPECT since at least the 1990s. The entire detector system can rotate on the gantry or translate on a diagonal to adjust the system relative to the patient. The center image of the figure is a schematic representation of the pinhole collimators. There are 9 pinholes shown, each with a CZT detector unit behind. That detector unit is comprised of 4 CZT modules, each 40 mm x 40 mm to form an 80 mm x 80 mm detector. There is a total of 19 pinholes, each with its own detector unit, with 9 in the central slice and 5 each in the two adjacent slices. The right side of the figure shows a photograph of the collimator (Ex. 146 at GE_SDM_00389460) with 27 apertures. There are slots for 27 apertures and 27 detector units, but only 19 are populated due to the cost of the extra 32 CZT modules.

31. Imaging larger patients can be an issue with any SPECT scanner due to increased attenuation and scatter. Regions of interest (“ROIs”) can also be farther from the surface of the patient, limiting access by the camera. The GE NM 530c has an additional challenge: it cannot position the patient’s heart within the field of view (FOV) of the system because the surrounding housing has a fixed distance to the center of the FOV. This is shown clearly in the figure shown in Appendix C (Ex. 136, SDML_00650608).

32. Both D-SPECT® and the NM 530c use focused imaging, but in different ways. GE’s NM 530c has a fixed FOV that is big enough for the heart, but truncates other regions to improve the number of photons from the heart. D-SPECT® [REDACTED]

[REDACTED] A technologist then [REDACTED]

[REDACTED] The scanner then spends [REDACTED]

[REDACTED]

[REDACTED]

33. D-SPECT®, compared to the GE NM530, is cost efficient in its design [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 51, at

GE_SDM_00010977.

34. GE offers general-purpose scanners referred to as the NM 800 series, as noted on their website at <https://www.gehealthcare.com/products/molecular-imaging/nuclear-medicine/nm-800> (Accessed August 26, 2021). The NM 800 series come with gamma cameras

with either traditional NaI crystals and PMT readouts or with CZT detectors. The size of the CZT gamma camera is 51 cm x 39 cm, which is a typical size for a traditional rotating SPECT scanner.

35. The GE NM 800 system series, shown in Appendix D, appears to be updated versions of traditional SPECT scanners. The previous generation, the 600 series, has a similar overall appearance, but appears to use different CT systems for attenuation correction and localization. For purposes of this case, the important point is that both the 600 and 800 series are traditional SPECT scanners in the way they acquire data: (i) there are a small number of heads (1-2); (ii) the heads are large enough to measure the cross-section of a human body (about 52 cm across); (iii) the heads are mounted with an exchangeable collimator system; (iv) although there is some independent motion of the heads (for example, to reconfigure into a relative 90° L-shape, as is typically used in cardiac imaging, or to adjust the radius), the major motion comes from gantry rotation; and (v) because of the relatively large heads, proximity to some portions of the body at certain angles is more limited than the smaller, swiveling cameras, like those on the D-SPECT®. Appendix D shows Images of the 800 series from GE. Ex. 137 at SDML_01279509.

SPECTRUM'S VERITON® [REDACTED]

36. Spectrum's design of the Veriton® was new and unique in the industry. In discussions with GE, it was known as the "GPC", i.e., the General-Purpose Concept.

37. The major departures from existing general-purposes systems that I focus on here include:

- a. [REDACTED]
- b. [REDACTED]

- c. Swiveling of the detector columns about an axis parallel to the gantry's axis of rotation (item e, below);
- d. High-sensitivity, [REDACTED]
[REDACTED]
[REDACTED]
- e. Use of a *rotating gantry* to [REDACTED]
[REDACTED]
[REDACTED] and
- f. *Focused imaging scans* of a ROI where the motion plan is based on (i) [REDACTED]
[REDACTED]
[REDACTED]

38. The combination of these features as well as many technologies behind the scenes made the system capable of high-performance imaging.

GE'S STARGUIDE

39. GE's StarGuide is similar in appearance to Spectrum's Veriton[®] and also has many of the same functionalities, including the features noted above.

40. [REDACTED]

[REDACTED] The StarGuide and Veriton[®] are shown below, with the figures modified to show every third column (for clarity) circled in red. Ex. 149, at GE_SDM_00166496;

[REDACTED]

The GE system is described in the 510(k) application GE submitted to the FDA; [REDACTED]
[REDACTED] Ex. 150, at GE_SDM_00440393. Further,
[REDACTED] Ex. 189 at
GE_SDM_00225121. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Ex. 121 at SDML_00845882. [REDACTED]
[REDACTED]
[REDACTED]

41. [REDACTED]
[REDACTED] Ex. 48, GE 510(k) at
GE_SDM_00440332. [REDACTED]
[REDACTED] Ex. 150 at GE_SDM_00440393. *See also* Ex. 48 at GE_SDM_00440338. Spectrum
provided GE with the design and technical information necessary to implement this feature as
discussed in e.g., ¶¶50, 57, 74 below.

42.

[REDACTED]

Ex. 49 at GE_SDM_00440063.

43.

[REDACTED]

44.

[REDACTED] functions virtually identically to that of the Veriton®. [REDACTED]

[REDACTED]

[REDACTED]

45. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2009-2010 DUE-DILIGENCE PROCESS

46. Based on my review of the documents, it appears that Spectrum and GE began discussions about the D-SPECT[®] in April 2009 (Ex. 52), which shortly thereafter included information relating to a general purpose camera or GPC. Ex. 130 at SDML_00667196.

47. During this 2009-2010 process, the parties held in-person meetings and corresponded via email, with Spectrum sharing information relating to the D-SPECT[®] and its GPC concept and performance results (e.g., simulation-validation process).

48. GE and Spectrum planned to have a meeting on September 16, 2009, but before this meeting, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

49. On September 16, 2009, the parties held an in-person due diligence meeting, attended by scientific representatives of both the GE Research team (Alex Ganin, Floris Jansen, Nathan Hermony and others) and Spectrum (Yoel Zilberstien, Nathaniel Roth, and others). Ex. 130 at SDML_00667196; Ex.57. GE proposed that the agenda (found at Ex. 130 at SDML_00667196) include Spectrum's patent portfolio as well as the basis for Spectrum's acquisition and reconstruction algorithms, identifying the following "Technology" topics:

- a) [REDACTED]
- b) Protocols (Plans for developing then monetizing via revenue from consumables)
- c) Linkages of camera & upgrade kit development with protocols & consumables business model
- d) [REDACTED]

50. [REDACTED]

[REDACTED]

[REDACTED]

- a. [REDACTED]
- b. [REDACTED]

- c. [REDACTED]
- d. [REDACTED]
- e. [REDACTED]
- f. [REDACTED]

51. Spectrum forwarded to GE's Nathan Hermony copies of the presentation and video. Ex. 58; Ex. 59. The presentation and video point out the above critical features of Spectrum's GPC that solve many of the drawbacks of the prior GPC's. For example, Spectrum's novel GPC, even at this stage of development, addresses the prior GPC's large, unwieldy detectors [REDACTED]

[REDACTED]

52. GE was interested in Spectrum's design from the beginning, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 153, GE_SDM_00366502.

53. Further, Spectrum's newly-designed GPC included a large number of smaller detectors, which enabled the detectors to swivel the full 180 degrees to obtain additional views of the region of interest of the patient.

54. This aspect of Spectrum's new GPC concept represented a departure from the conventional thinking in GPC scanning machines, which utilized large detector panels.

55. In addition to teaching GE about the physical features, as well as the concept and design of Spectrum's GPC, Spectrum also provided critical "simulation data", which ultimately convinced GE that Spectrum's novel design would work.

SIMULATIONS IN 2010

56. Simulations are computer generated scans that take account of numerous variables associated with acquiring and reconstructing SPECT data. Simulations predict performance specifications that can be expected when running actual patient scans and are based on computer-generated data; these specifications include the expected number of "counts" or photons generated by the patient being scanned, background noise and artifacts. The results of the simulations provide extremely valuable information, including optimal scanner parameters and techniques and the length of scan time that is necessary and the conditions under which the hoped-for result can be achieved.

57. In 2009-2010, GE attempted to replicate Spectrum's simulation data by using GE's own simulation of the data-acquisition process based on Spectrum's parameters such as number of columns, number of CZT modules per column, and collimator dimensions; and techniques (such as, sweeping the columns to do the sampling; rotating the gantry; sampling patterns for focused imaging). Because GE struggled with reproducing the simulations, Spectrum worked with them, ensuring that GE understood many of the important details that were key to the system. Ex. 60, SDML_01168791 and SDML_01168792 - 816 (Spectrum PowerPoint presentation emailed to GE on August 16, 2010 with GPC architecture and simulations), Ex. 61, SDML_00263114-SDML_00263116 (showing summary of August 25, 2010 discussion regarding simulations and algorithms).

58. Spectrum agreed to reconstruct the simulated data that GE provided to Spectrum as GE was unable to reconstruct their own simulated data at that time. Spectrum proceeded to conduct simulations and reconstructions of a digital phantom provided by GE at the request of GE's Floris Jansen. Ex. 62, SDML_00038321-00038341.

59. Important details were revealed to Floris Jansen and GE during the process of validating the simulation. Those include: (i) the use of [REDACTED]

[REDACTED] (iii) [REDACTED]

[REDACTED]

Anisotropic Collimators:

60. I [REDACTED]

[REDACTED]

[REDACTED] Ex. 63,

GE_SDM_00366546. [REDACTED]

[REDACTED]

61. The collimator parameters revealed to Floris Jansen and GE are very unusual in that they are [REDACTED] Mr. Jansen acknowledged the [REDACTED] in another context in an email (Ex. 64, SDML_00733345) saying: "I used their [REDACTED] for generating the projections - that way they should have the least work to do to their recon code to make this work." The exchange reflected in Ex. 64 demonstrates that GE was trying to simulate the data that GE expected Spectrum's system to observe in different imaging scenarios. Spectrum's Nathaniel Roth would then take the data, reconstruct it, and send the results back to Floris Jansen.

62. GE's use of Spectrum's simulation data highlights the fact that GE was not independently coming up with a GPC that – coincidentally – was designed like Spectrum's GPC (which became the Veriton®). I [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Focused Imaging:

63. Regarding focused imaging, Spectrum, before 2010, used a version of focused imaging in the D-SPECT®, which was devoted to imaging the heart. The approach was a combination of what Spectrum calls the [REDACTED] patterns. In the former, the [REDACTED] range. In the latter, the [REDACTED] in the cardiac region and [REDACTED] the heart was determined by [REDACTED]

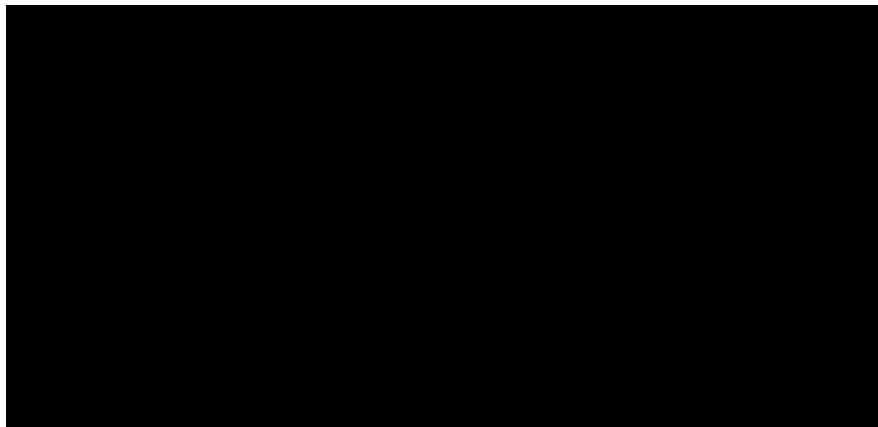
[REDACTED] Nathaniel Roth of Spectrum provided its [REDACTED] to GE on June 30, 2010 and July 4, 2010 when also providing engineering and dimension information that were necessary for GE to perform simulations. Ex. 65, SDML_00038342 and SDML_00038345–350, and Ex. 66, SDML_00038351-00038355. In these emails, Spectrum showed GE its inventive concept of focused imaging (e.g., focused scanning of [REDACTED])

[REDACTED]

[REDACTED]

64. Focused-imaging scan patterns give improved counts and improved resolution in the regions that matter most. More [REDACTED] Ex. 65 shows the sampling pattern Spectrum uses (see image below), as reproduced by Floris Jansen as he was learning from Spectrum. Note that the red lines represent the [REDACTED] [REDACTED] and the green lines, the cardiac [REDACTED] The cardiac region is [REDACTED] That is, [REDACTED]

[REDACTED]



[REDACTED]

65. [REDACTED] is implemented by Spectrum [REDACTED] measure. When the 12 detector heads are brought to their smallest achievable diameter so that they are almost touching, [REDACTED] [REDACTED] thus, there are gaps. As the object size grows, its circumference grows, but the total linear dimension of the detectors is unchanged, increasing the gaps.

66. Spectrum taught GE that the [REDACTED] [REDACTED] essentially, this multiplies the [REDACTED] Floris Jansen's slides of Ex. 65 at SDML_00038346 state that the goal is "Use GE GRC simulation tools to understand Spotlight's [i.e. Spectrum's] cardiac and General Purpose Concepts." This is

confirmed by Floris Jansen’s email attaching the slides where Floris Jansen asks Spectrum to “confirm” his interpretation of the geometry “is correct.” Ex. 65 at SDML_00038343. Three slides later after stating the goal, (Ex. 65 at SDML_00038349), he shows the sampling scheme he is reproducing: [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Additional support comes from Floris Jansen’s statement on that slide, “Every other [REDACTED] only drawn for clarity (one gantry position).” Ex. 65 at SDML_00038349.

GPC ALPHA PROTOTYPE AND ARM PROTOTYPE

67. To an imaging scientist, proof of feasibility comes in two stages. The first is simulation since if it doesn’t work in simulation where everything is perfectly controlled, it will not work in real life. The second is experimental prototyping. Spectrum developed a GPC feasibility prototype [REDACTED] They imaged phantoms and patients. The results from the prototype, in combination with simulated results, demonstrated feasibility. Ex. 141 at SDML_01055116 and SDML_01055131.

68. Spectrum created [REDACTED] based on the detailed illustrations shown in the video Ex. 76, which was shared with GE as discussed below in ¶¶74-77. [REDACTED]

[REDACTED] Ex. 133 (GE_SDM_00154502).

CONCLUSION OF 2010 DUE DILIGENCE

69. GE seemed to believe the Spectrum system would work, at least for some purposes, but had some lingering doubts regarding whether it would work as a GPC. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] Ex. 154 at GE_SDM_00005376. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] Ex. 155 at GE_SDM_00366578

(emphasis added). Thereafter, GE's interactions with Spectrum appeared to stop until 2012.

OVERVIEW OF 2012 DUE-DILIGENCE PROCESS

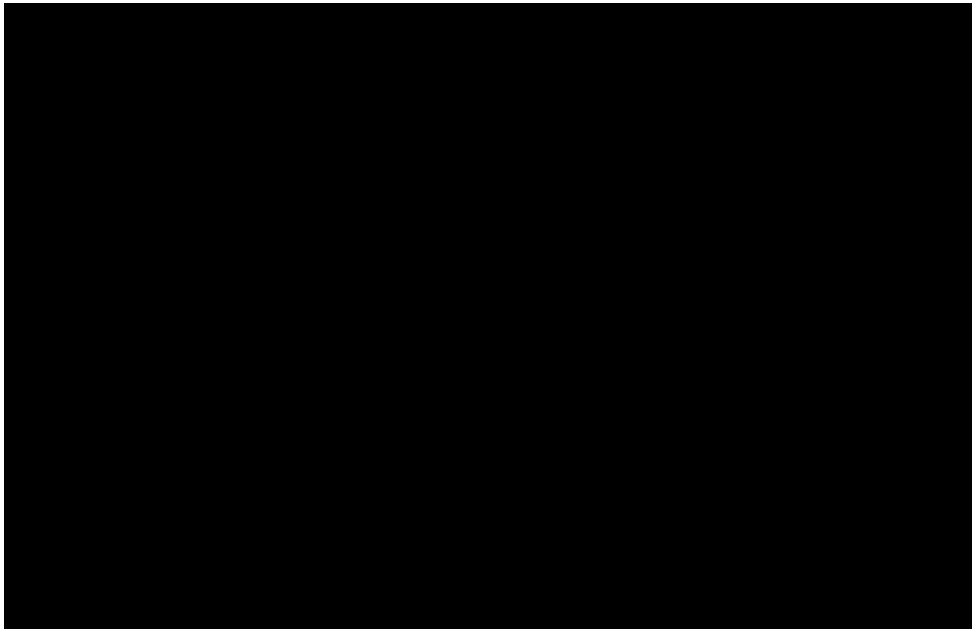
70. The due-diligence process resumed with a 3-day meeting from January 24-26, 2012, with an agenda sent out by William Burgman of GE. Ex. 70, SDML_00315379.

71. The pace was rapid after this meeting. Mr. Roth sent an email dated January 31, 2012 to Aharon Peretz, Reuven Brenner, and William Burgman sharing documents regarding Spectrum's GPC scan time as compared to the conventional SPECT camera and PET cameras. Ex. 78, SDML_00038465-00038466.

72. Riyadh Mahameed from GE wanted to present this project to higher-level management at GE and asked Nathaniel Roth of Spectrum to send him performance specifications

¹ [REDACTED]
[REDACTED]

and example images on February 14, 2012. Ex. 76, SDML_00038491. On the same day, Nathaniel Roth sent the following Performance-specification slide. Ex. 72 at SDML_01180437.



73. Also on February 14, 2012, Mr. Mahameed asked for phantom images and Nathaniel Roth supplied those images in a 5-slide PowerPoint presentation. Ex. 105.

74. Mr. Mahameed, on February 15, 2012, asked Mr. Roth to provide “one slide with movie to demo the GPC gantry/system concept” and “one slide with difference of collimator characteristics between D-SPECT® & GPC with the reasoning behind this decision.” Ex. 106, at SDML_01180486. In response, Mr. Roth shared with Mr. Mahameed (on the same date) a 6-slide PowerPoint presentation with the “updated Jaszczak simulation” along with the collimator information requested, as well as the video that was shared with GE during the January 24, 2012 due diligence meeting. Ex. 76, SDML_00038490-00038498. This presentation shows Spectrum’s use of the [REDACTED]

[REDACTED]

[REDACTED]

Ex. 76.

[REDACTED] Ex. 76 at SDML_00038494.

75. GE could easily use the information in this presentation to calculate [REDACTED]
[REDACTED] Other details for the collimator (such as [REDACTED]
[REDACTED]
[REDACTED] had been shared with GE by June 2010 via the data room. Ex. 5, NR Dec., ¶44. Specifically, I understand that the presentation reflected in Ex. 131 had been shared, including detailed information relating to the collimator. Ex. 131, at SDML_01167715.

76. The video Spectrum shared with Mr. Mahameed on February 15, 2012 (and which was shown to GE during the January 24, 2012 meeting, titled “GPC Alpha Demo.wmv”) depicts rotation of the gantry and the [REDACTED] for brain imaging and body contouring. Ex. 76 at SDML_00038492. The rendering in the video is without the covers so that one clearly sees the radial arms, rotation, and swiveling. This [REDACTED]
[REDACTED]
[REDACTED]
(FOV) for reconstruction.

77. The video (Ex. 76) also demonstrates Spectrum’s [REDACTED]
[REDACTED] Spectrum emphasized in its alpha-prototype discussion that a [REDACTED]
[REDACTED] Ex. 121 at SDML_00845882. Further, Spectrum explained to GE that [REDACTED]
[REDACTED]
[REDACTED] Ex. 121, SDML_00845882.

78. Spectrum showed that it could perform a full 3D total body scan [REDACTED]

This was a key element in the commercial viability of a 360° gantry system; it showed that more patients could be scanned on a single system, thus allowing for enhanced patient throughput and time saving efficiencies.

79.

PARALLEL VALIDATION/DEVELOPMENT EFFORT IN 2012

80. Beginning sometime around June 2012,

Ex. 157, GE SDM 00241753.

81. In support of this latter explanation,

_____ (Ex. 80, GE_SDM_00127805). In further support of this explanation, _____

[REDACTED]

[REDACTED] Ex. 81 at GE_SDM_00254414. July 30, 2012 was a Monday and August 1, 2012 was a Wednesday.

82. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Ex. 81 at GE_SDM_00254414.

83. In further support of this effort, [REDACTED]

[REDACTED]

[REDACTED] Ex. 82, GE_SDM_00128849. [REDACTED]

[REDACTED] For example, [REDACTED]

[REDACTED]

[REDACTED] Ex. 83, GE_SDM_00376426.

84. Another example [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Ex. 84 at

GE_SDM_00203698):



85. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 85, at GE_SDM_00148805. [REDACTED]

[REDACTED]

[REDACTED]

(Ex. 85 at GE_SDM_00148816). Spectrum informed GE that the GPC (and D-SPECT[®])

used [REDACTED] (Ex. 64, SDML_00733345);

[REDACTED]

[REDACTED]

86. [REDACTED]

[REDACTED] Spectrum's proprietary information takes two forms: (1) [REDACTED]

[REDACTED] and (2) the use of Spectrum parameters for benchmarking potential GE designs against Spectrum's. [REDACTED]

[REDACTED] It is my opinion that this column is for [REDACTED] based on the parameters found within. [REDACTED]

[REDACTED] Although I do not understand the rationale [REDACTED]

[REDACTED] (Ex. 160, GE_SDM_00286271) and attaching a paper regarding Spectrum's D-SPECT[®] published in *Physics in Medicine and Biology* in 2009. [REDACTED]

[REDACTED] Figure 5 of the attached paper (Ex. 160 at GE_SDM_00286282),

which was a peer-reviewed publication, [REDACTED] My analysis of the data suggests a [REDACTED]
[REDACTED] Ex. 161 at
GE_SDM_00005708.

87. [REDACTED]

[REDACTED] This is the true value in one direction
for the septal walls, known only through due-diligence. [REDACTED]
[REDACTED] almost an
exact match with the septal length in the other direction: [REDACTED] [REDACTED]

[REDACTED] these are the two septal lengths provided to GE by Spectrum during
due diligence and were only available through due diligence. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 166 at GE_SDM_00206273.

88. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

89. The group also worked, with input from Mr. Bouhnik, on focused imaging, one of the key features for Spectrum's GPC. [REDACTED]

[REDACTED]

[REDACTED] (Ex. 86, GE_SDM_00256150). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (my red arrow is a

guide) [REDACTED] Ex. 87, at GE_SDM_00205118.

[REDACTED]

90. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex.

88 at GE_SDM_00254370.

91. After the deal with Spectrum fell through, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] For example, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Ex. 90, GE_SDM_00256146). [REDACTED]

[REDACTED]

[REDACTED]

92. GE continued to use images generated by software benchmarked against privileged Spectrum information from due diligence, throughout the design process, including for marketing/regulatory purposes. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

93. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

94. Moreover, Ex. 85 (“GPC Update Nov 15_Final”) at GE_SDM_00148809 [REDACTED]

[REDACTED] Ex.167 at GE_SDM_00194938. [REDACTED]

[REDACTED]

[REDACTED] Ex. 85 at GE_SDM_00148809.

OVERLAP OF GE EMPLOYEES

95. Key GE personnel in the due-diligence process, who agreed to be bound by the 2009 Agreement, assumed leadership positions in the Stargate project, including, for example Mr.

Bouhnik, who was part of the due-diligence process (even communicating directly with Spectrum (e.g., Ex. 64, SDML_00733345)) and became the project manager of Stargate.

96. Ex. 91, GE_SDM_00113904, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Ex. 93, GE_SDM_00003293, line 170); [REDACTED]

[REDACTED] (Ex. 93 at GE_SDM_00003293, line 82). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

97. Mr. Mahammed was [REDACTED]

[REDACTED] Ex. 120 at

GE_SDM_00230903- GE_SDM_00230940) [REDACTED]

[REDACTED]

[REDACTED]

98. [REDACTED]

[REDACTED] Ex. 92 at GE_SDM_00204808. [REDACTED]

[REDACTED] Ex. 92 at GE_SDM_00204811. [REDACTED] Ex.

92 at GE_SDM_00204812. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 93
at GE_SDM_00003293. [REDACTED]
[REDACTED]

GE'S ACTIVITY IN FEBRUARY 2013

99. At some point, GE began planning to implement its next general-purpose SPECT scanner and the evidence [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] (Ex. 95, GE_SDM_00205058) and

b. [REDACTED] (Ex. 169 at GE_SDM_00148764).
[REDACTED]
[REDACTED]
[REDACTED] (Ex. 170 at
GE_SDM_00195298).

100. [REDACTED]
[REDACTED]
[REDACTED] Ex. 94,
GE_SDM_00300026 - 00300030.

101. Several of the features of this project came directly from the Spectrum due-diligence. For example, Spectrum's design used [REDACTED] At this point in time, GE's SPECT scanners used either pinhole collimation (GE's NM 530c scanner) or "un-registered" parallel-beam collimation made of lead (all general-purpose scanners).

102. Further, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 94 at GE_SDM_00300027 [REDACTED]

[REDACTED]

103. In addition to the [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] I am not aware

of any GE general-purpose scanner [REDACTED] Ex. 94 at

GE_SDM_00300027.

104. [REDACTED]

[REDACTED]

[REDACTED] Ex. 94 at

GE_SDM_00300028.

105. [REDACTED]

[REDACTED] Ex. 94 at GE_SDM_00300028. [REDACTED]

[REDACTED]

[REDACTED] Ex. 94 at
GE_SDM_00300029; Ex. 69 at GE_SDM_00005088.

106. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

107. [REDACTED]

[REDACTED]
[REDACTED] Ex. 95

at GE_SDM_00205058. [REDACTED]

[REDACTED]
[REDACTED]

[REDACTED] Ex. 93 at GE_SDM_00003292-293.

108. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

109. For example, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

110. [REDACTED]

[REDACTED] Ex. 191 at GE_SDM_00485235. [REDACTED]

[REDACTED] I refer here to the Bates numbers, as well as slide numbers,
to avoid confusion. [REDACTED]

111. [REDACTED]

[REDACTED] discussed herein at

¶¶119-125. [REDACTED]

In other words, [REDACTED]

[REDACTED] The result

gets even better using a 48 cm (not shown), etc.... [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] There are no cases considered (such as whole-body, brain, cardiac) [REDACTED] Thus, there does not seem to be any scientific or engineering rigor [REDACTED] especially when their existing general-purpose systems – including GE’s CZT gamma cameras – use 40 cm [REDACTED]

[REDACTED]

[REDACTED]

112. Further, as noted above, in ¶77, Spectrum discussed the use of a [REDACTED]

[REDACTED]

[REDACTED] Ex. 122 (GE_SDM_00205098). [REDACTED]

[REDACTED] Ex. 123 at GE_SDM_00244939. In my experience, this type of detail would not have garnered this much attention this early in a project unless they recognized this as a critical feature, although they never used it before. [REDACTED]

[REDACTED] (Ex. 194 at GE_SDM_00212702).

113. [REDACTED]

[REDACTED] (Ex. 96, GE_SDM_00017481-GE_SDM_00017482). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Ex. 97, GE_SDM_00012345). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 96 at GE_SDM_00017481. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 96 at
GE_SDM_00017481.

MAHAMEED PASSES DUE DILIGENCE FILES TO GROBSHTEIN

114. [REDACTED]

[REDACTED] (Ex. 45 at GE_SDM_00297177), [REDACTED]

[REDACTED] This email contained 12 attachments. [REDACTED]

[REDACTED]

[REDACTED] Ex. 45 at
GE_SDM_00297206. The full listing of file names with a brief description can be found in
Appendix E.

115. [REDACTED]

[REDACTED]

[REDACTED] (Ex. 100,
GE_SDM_00127723). This email contained 15 attachments, as listed in Appendix F. These were
important files [REDACTED]

[REDACTED]

116. [REDACTED]
[REDACTED] Ex.101,

GE_SDM_00133152.

117. [REDACTED]
[REDACTED]

[REDACTED] (Ex. 222 at GE_SDM_00378683), [REDACTED]

[REDACTED] (Ex. 77 at GE_SDM_00378717). [REDACTED]

[REDACTED]

Ex. 195 at GE_SDM_00235114.

118. [REDACTED]

[REDACTED] Ex. 196 at GE_SDM_00256144. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 84, GE_SDM_00203698 [REDACTED]

[REDACTED] (Ex. 196 at

GE_SDM_00256144, [REDACTED]

[REDACTED] (Ex. 108,

GE_SDM_00204311), [REDACTED] (Ex. 109, GE_SDM_00204276), [REDACTED] (Ex.

110, GE_SDM_00194604, [REDACTED] (Ex. 103

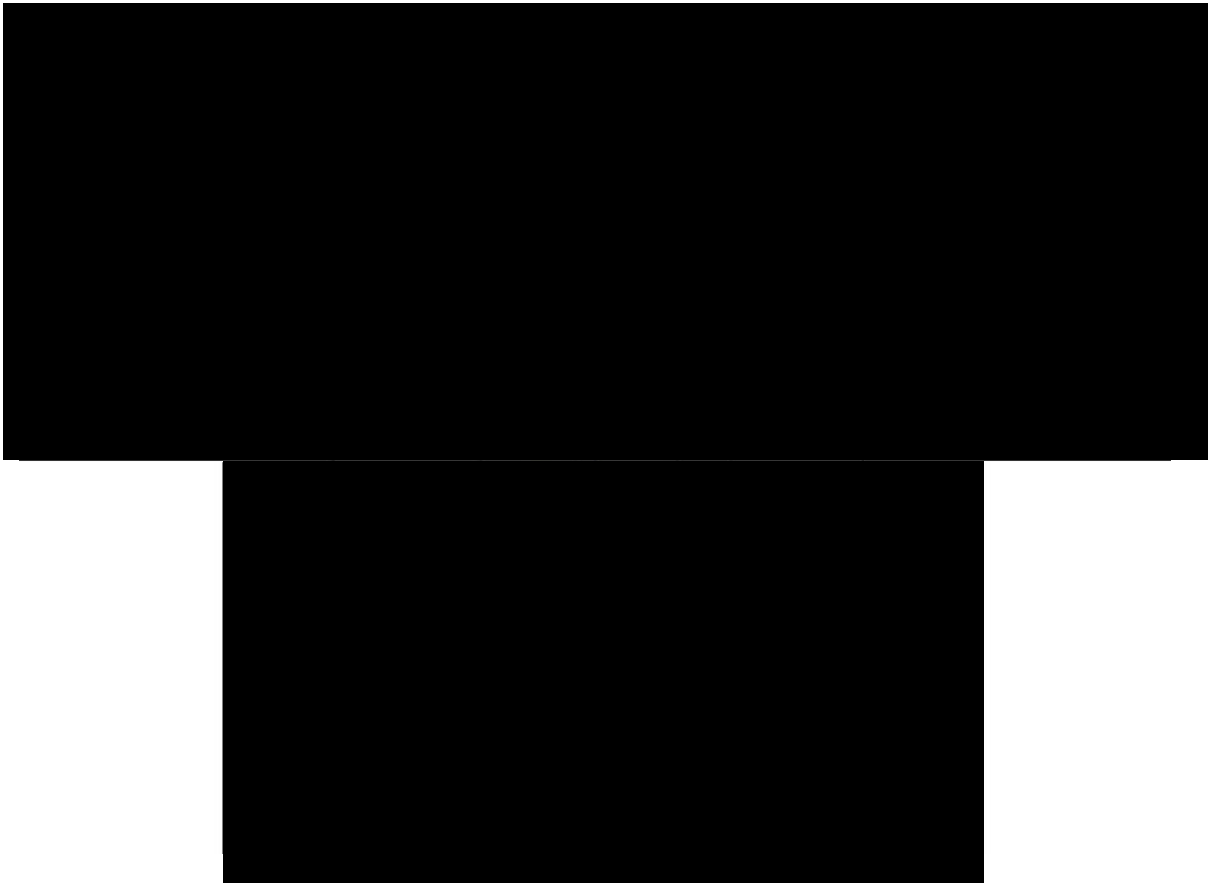
GE_SDM_00236172, [REDACTED] (Ex. 117, GE_SDM_00249998, [REDACTED]

[REDACTED] (Ex. 118, GE_SDM_00377196).

GE ADOPTS SPECTRUM'S PERFORMANCE SPECIFICATIONS

119. GE's "Stargate" was designed using performance specifications given to them by Spectrum during the 2012 due-diligence period.

120. As noted above in ¶¶72-74, on February 13-14, 2012, GE's Mr. Mahameed asked Spectrum's Nathaniel Roth in a set of emails for "GPC specifications" (Ex. 104, at SDML_00377339), for phantom-simulation results (Ex. 105, at SDML_01275201), and for a movie and collimator characteristics (Ex. 106 at SDML_01180486). Mr. Roth responded with the requested information and, on February 15, 2012, Mr. Mahameed replied to Mr. Roth (Ex. 107, at SDML_00377560) about the talk he gave and sent three slides. Ex. 107, at SDML_00377561-SDML_00377563.



121. This paragraph describes in depth the differences I observe between Slide 1 from Ex. 107 (sent from GE to Spectrum after Mr. Mahameed's presentation) and the slide found in Ex.

72 at SDML_01180437, which has the performance specifications sent by Nathaniel Roth to GE on February 14, 2012 for the presentation. Ex. 72 at SDML_01180435. In summary, the column denoted with “GPC*” is basically intact and the column for PET performance has been removed. In addition, in comparison to the original, in the table returned by GE: (1) the A-SPECT (i.e., traditional two-headed system) scan time for brain imaging has been increased to 35 min from 25 min; (2) “Head 2 Hips = 100 cm” has been removed under bone scan; (3) “or 3BP (H2H)” has been removed for A-SPECT bone scan; (4) “H2H scan time: 22.5 min” has been removed for A-SPECT bone scan; (5) Color for GPC* column has been changed to black; (6) “or 4BP (H2H)” has been removed for GPC* bone scan; and (7) “H2H scan time: 8min” has been removed for GPC* bone scan.

122. The summary of the previous paragraph shows that the performance for GPC is unchanged. We note here for future reference that the column for GPC appears with an asterisk for a footnote, which is carried over from Nathaniel Roth. [REDACTED]

[REDACTED]

123. The slides in Ex. 107 also use some of the images that Nathaniel Roth emailed earlier. In particular, in the top row and third column of the slide at SDML_00377562, there is an image labeled “Hoffman Phantom”; this is an exact match to the image on Slide 5 of Ex. 76, at SDML_00038497. In addition, two rows below that in Ex. 107 is a simulated image labeled “Better IQ than Tandem”; this is an exact match for an image on Slide 6 (Ex. 76 at SDML_00038498) (“5 min”, third row, eighth column). The third slide of Ex. 107 uses an image that Mr. Roth emailed. In particular, the image in the right column is an exact match for the “2 minute” image on slide 4 of Ex. 76 at SDML_00038496; that image has been swapped left-to-right and rotated by 90°.

124. [REDACTED]

[REDACTED] Ex. 173 at

GE_SDM_00374205. [REDACTED]

[REDACTED]

[REDACTED] Ex. 107 – [REDACTED]

[REDACTED] (§122).

125. [REDACTED]

[REDACTED] (1) (Ex. 174, GE_SDM_00195104 [REDACTED]

[REDACTED] (2) Ex. 167 at GE_SDM_00194940 [REDACTED]

[REDACTED] (3) Ex. 175, GE_SDM_00313872 [REDACTED]

[REDACTED] (4) Ex. 176, GE_SDM_00194844 [REDACTED]

[REDACTED] (5) Ex. 177, GE_SDM_00204115 [REDACTED]

[REDACTED] (6) Ex. 178, GE_SDM_00204106 [REDACTED]

[REDACTED] (7) Ex. 179, GE_SDM_00204101 [REDACTED]

[REDACTED] (8) Ex. 180, GE_SDM_00204104

[REDACTED] (9) Ex. 181,

GE_SDM_00204099 [REDACTED]

(10) Ex. 182, GE_SDM_00319565 [REDACTED]

[REDACTED] (11) Ex. 183, GE_SDM_00254148 [REDACTED]

[REDACTED] (12) Ex. 184 at GE_SDM_00194869 [REDACTED] (13)

Ex. 185 at GE_SDM_00203535 [REDACTED] and (14) Ex. 186 at

GE_SDM_00195218 [REDACTED] based on the records currently available.

GE LEADERSHIP'S PRESENTATION OF "STARGATE"

126. There is a copy of [REDACTED]
(Ex. 119) showing [REDACTED]
Ex.119 at GE_SDM_00230530. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Ex. 119 at
GE_SDM_00230531. Numerous other copies of this document can be found in different locations.

127. Spectrum provided GE these features. Spectrum's design always used [REDACTED]
[REDACTED] where all the [REDACTED]
[REDACTED] Ex.76 at SDML_00038494. [REDACTED]
[REDACTED] Spectrum also previously showed GE [REDACTED]
[REDACTED] For example, Ex. 100 at
GE_SDM_00127756, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

128. [REDACTED]
[REDACTED] are very similar to performance specifications given to GE's Mr.
Mahameed by Spectrum on February 15, 2012, at GE's request. Ex. 107 at SDML_00377561.

129. Shortly after [REDACTED]
[REDACTED] Ex. 120. The cover of this latter
document also shows [REDACTED] Ex. 120,

at GE_SDM_00230903.

Ex. 120, at GE_SDM_00230928.

(Ex. 120 at GE_SDM_00230928)

Ex. 77, at GE_SDM_00378714)

Ex. 77, at GE SDM 00378717.

Ex. 120, at GE_SDM_00230934.

130. Ex 120 at GE SDM 00230939 lists

131. Of the 10 characteristics listed above: 1, 4, 5, 6, 8, 9, and 10 describe the system
um presented to GE. Number 3 was later dropped or postponed by GE. What is particularly
g is how casually

[REDACTED] Spectrum developed an entire design-justification document (Ex. 129) before presenting these numbers to GE. [REDACTED]

PROOF GE IMPLEMENTED SPECTRUM'S FOCUSED IMAGING SCAN PATTERN

132. As noted above in ¶¶45,63

As further proof of this, I compared two complete sets

Ex. 172, GE_SDM_00251386. (Ex.172 at GE_SDM_00251387-388),

Ex. 203 at GE_SDM_00254108.

133. I evaluated

The minor changes to

that I made are set forth in Appendix H.

134. Spectrum's motion plan in D-SPECT[®] is known as

Ex. 45

GE_SDM_00297177; See also Appendix E.

as described in ¶63.

135. I first got running and then used a built-in configuration that corresponded to an elliptical torso of width 620 mm (side-to-side) and depth 240 mm (front-to-back). This torso also had a built-in region of interest centered on the torso with diameter 100 mm. There were also parameters for the . I ran with three different configurations, stepping ran. For the last configuration, I slightly modified to move the lesion off center by 50 mm laterally and 50 mm anteriorly. The following are screenshots of three different movies produced each from a different configuration. The left does not use

focusing. The other two use [REDACTED]
[REDACTED] When these movies [REDACTED] compared with Spectrum's video shown to GE during due diligence (Ex. 76 at SDML_00038492 "GPC Alpha Demo.wmv"), the high similarity of the function of the two systems is evident.

[REDACTED]

136. The [REDACTED]
[REDACTED] I extracted the angular setting and duration for each head and each rotation view for each scan. I then produced a series of plots to describe their motion. Below shows the [REDACTED]

[REDACTED]

137. The figure below shows the duration of each view for each of the [REDACTED]
There are two important results to note: (1) [REDACTED]

[REDACTED] and (2) the [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Ex.
50, at GE_SDM_00440618-GE_SDM_00440619. [REDACTED]
[REDACTED] Ex. 45 at GE_SDM_00297206.

[REDACTED]

138. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

139. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Feature	D-SPECT®	Veriton®	StarGuide
---------	----------	----------	-----------

[REDACTED]

140. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

141.

(Ex. 45 at GE_SDM_00297206 and
GE_SDM_00297207),

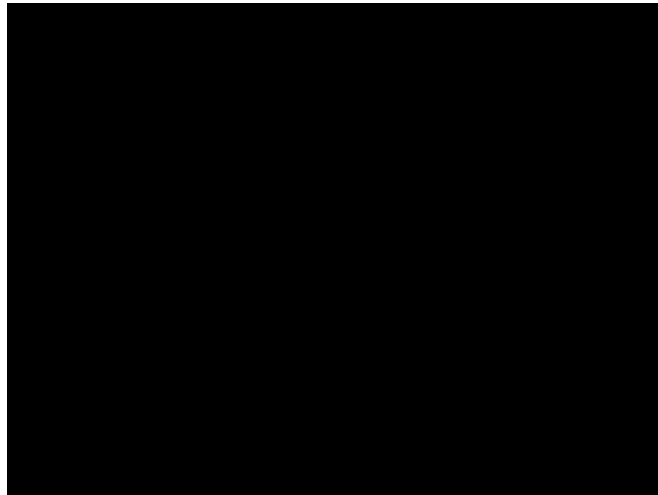
These red lines have been added by me to indicate the tangents
to the Spectrum labels these cases

Ex. 45,
GE_SDM_00297206; Ex. 5, NR Dec., ¶30. I have added those labels in red for clarity.

142.

[REDACTED]

[REDACTED]

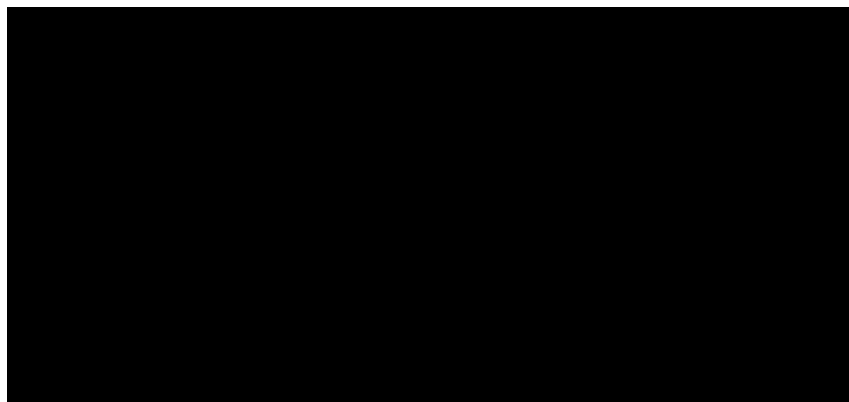


143. When GE's Floris Jansen asked Spectrum's Nathaniel Roth, on June 30, 2010, "I attach a short presentation with my interpretation of the geometry - can you please confirm this is correct?" (Ex. 65 at SDM_00038343), Mr. Jansen embedded the following question on slide 4 (Ex. 65 at SDML_00038348): [REDACTED]

[REDACTED]

[REDACTED] Mr. Roth answers this question with a figure that shows the [REDACTED]

[REDACTED] shown below (Ex. 65 at SDML_00038343).



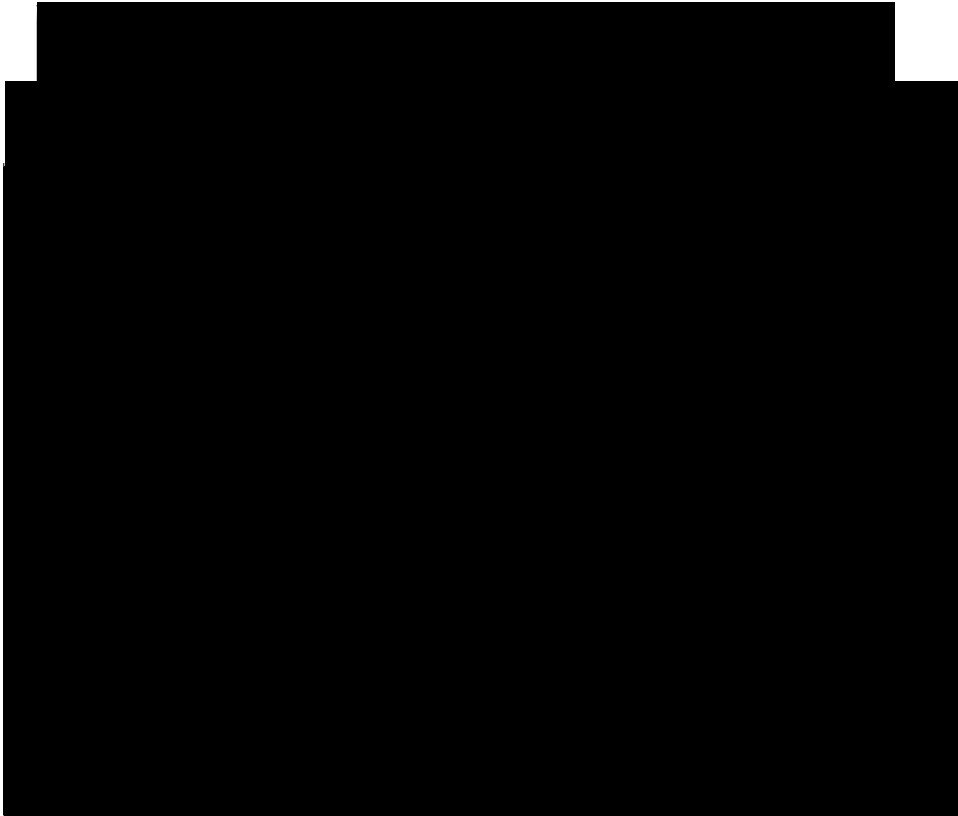
PROOF GE IMPLEMENTED SPECTRUM'S GANTRY ROTATION

144. I also evaluated

██████████ that GE rotated the gantry in the same manner as learned from Spectrum. Ex. 172, GE_SDM_00251386.

145.

146. The



147. It is important to realize that the [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

148. In summary, based on my analyses above, for both the focused view and the gantry rotation, and the documents I have reviewed, it appears to me that the [REDACTED] is essentially equivalent to what Spectrum gave GE, including even some small details such as the use of the [REDACTED] place of Spectrum's MRM.

**WOULD GE HAVE DEVELOPED STARGUIDE WITHOUT SPECTRUM'S
CONFIDENTIAL INFORMATION**

149. In early 2009, before due-diligence began in earnest with Spectrum, GE's product plan for general-purpose imaging seems to have had two prongs: (1) continue as-is with traditional systems; and (2) introduce a value product for emerging markets. I found no indication that GE

planned for a system that had all of the key features of Spectrum's VERITON®: (1) [REDACTED]

[REDACTED]

[REDACTED] The documents show [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

150. [REDACTED]

[REDACTED] Ex. 202 at GE_SDM_00286735. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

151. [REDACTED]

[REDACTED] Ex. 171 at GE_SDM_00139835. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 171 at GE_SDM_00139837. [REDACTED]

[REDACTED]

152. [REDACTED]

[REDACTED]

[REDACTED] Ex. 197 at GE_SDM_00292347 [REDACTED]

[REDACTED]

153. [REDACTED]

[REDACTED]

Ex. 197 at GE_SDM_00292357.

Ex. 197 at GE_SDM_0292360.

154.

Ex. 54 at

GE_SDM_00203618.

Ex. 54 at GE_SDM_00203620.

155.

Ex. 198 at GE_SDM_00286666.

Ex. 198 at

GE_SDM_0028666.

Ex. 198 at GE_SDM_0028667.

156. Ex. 198 would not have had either (i) independent detector heads or (ii) swiveling detectors, because the

157.

Ex. 153, GE_SDM_00366502.

[REDACTED]

[REDACTED] Ex. 153 at GE_SDM_00366502.

158. [REDACTED]

[REDACTED] Ex. 199, GE_SDM_00286376. [REDACTED]

[REDACTED] Ex. 199, GE_SDM_00286385-
GE_SDM_00286395. [REDACTED] (GE_SDM_00286387-388) [REDACTED]

[REDACTED] Ex. 65 at SDML_00038349-350; as
noted above in ¶¶63-66. [REDACTED] as taught at that time by
Spectrum. Ex. 55 at SDML_01279781 (Dated September 16, 2009); as I discussed above at ¶50.
Further, Ex. 200 at GE_SDM_00286581 [REDACTED]

[REDACTED] Ex. 199 [REDACTED] Ex. 199 at
GE_SDM_00286387-88. [REDACTED]

[REDACTED] Ex. 199 at GE_SDM_00286401.

159. Thus, the documents evidence that GE was not considering a device similar to the
Veriton® until after GE was influenced by the due-diligence meetings with Spectrum.

CONCLUSIONS

160. GE has developed the StarGuide scanner with a leadership team comprised of
personnel heavily involved in the due-diligence of Spectrum and who were under an obligation
not to use Spectrum's information other than for the purpose of evaluating the deal under
consideration. Those same people, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

161. Spectrum's Veriton® is very different than any other general-purpose system that had been on the market. As discussed at ¶¶39-45 above, GE's StarGuide system has a high degree of similarity in appearance and function to the Veriton®. For example, GE's StarGuide has [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

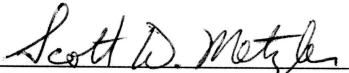
[REDACTED]

[REDACTED]

162. The high degree of similarity is not surprising to me based on the information that StarGuide's leadership team knew from Spectrum's simulations and also from Spectrum's physical prototype that produced high-quality images. These GE employees knew that Spectrum's GPC was a high-performance scanner and, from Spectrum's presentations and due-diligence responses to GE's queries, GE knew how it worked in great detail. The information Spectrum provided to GE, in confidence, including the concept and the proof of that concept, was an enormous advantage for GE, as it permitted GE to not waste its time and efforts in coming up with a design that worked. Spectrum passed along specifications for the design. As a result of all this information, GE was able to skip the research step and go directly to engineering.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Dated: August 27, 2021


Scott D. Metzler, Ph.D.

{J734906 04927825.DOCX}

Appendix A

The D-SPECT®

Ex. 47, Patton et al., J Nuc Cardiol, 14:501-13 (2007) at SDML_00198749



Figure 11. Photograph of D-SPECT camera. (Courtesy of Miki Nagler of Spectrum Dynamics.)

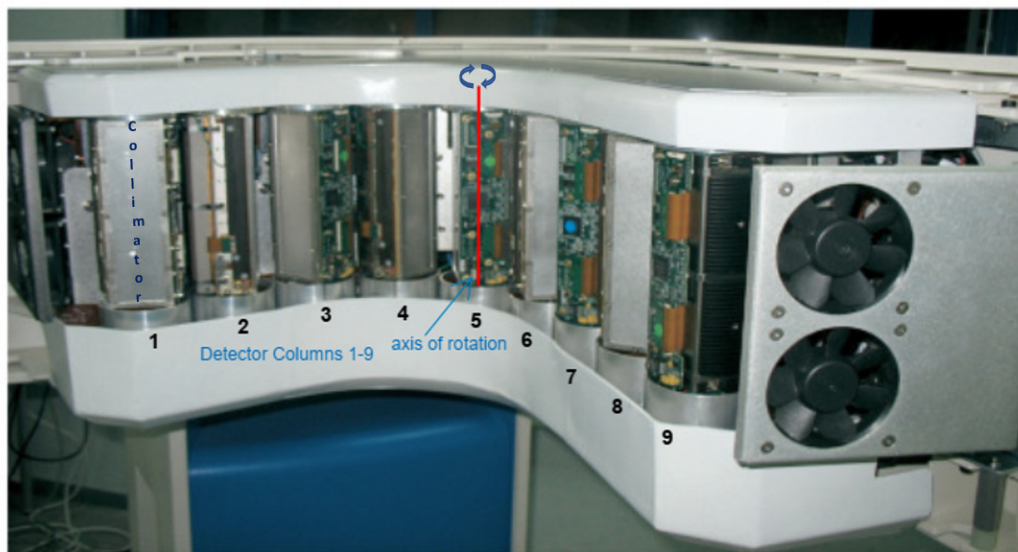


Figure 12. Photograph of 9-detector column configuration of D-SPECT camera. (Courtesy of Miki Nagler of Spectrum Dynamics.)

Annotations: (1) Nine modules are numbered 1-9; (2) “Collimator” added to No. 1; and (3) axis of rotation with circulation arrows added to No. 5.

Appendix B

GE'S NM530c

(Left) Image of GE's NM 530c. Ex. 204 at SDML_00328143. (Center) Figure 11 from Ex. 148 at SDML_00321598 (E.G. DePuey, Journal of Nuclear Cardiology, vol. 19(3), pp. 551-581, 2012). (Right) Photograph of the pinhole collimator for GE's system. Ex. 146 at GE_SDM_00389460. Note that there are actually 27 apertures in 3 rows of 9.

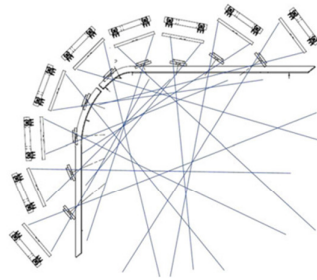
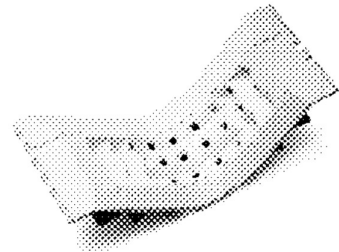


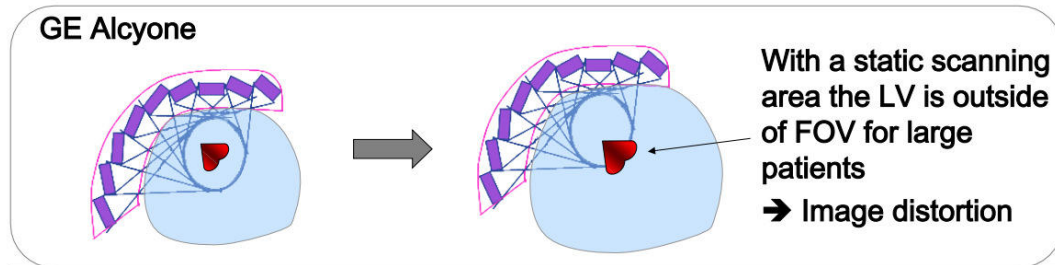
Figure 11. Schematic of the multiple focused pinhole collimator design of the Discovery NM 530c[®] camera, focused on the region of the heart. Spatial resolution is optimal at the focal depth of the collimators. Courtesy, General Electric Medical Systems.



Appendix C

This slide shows on the top the challenge of positioning large patients on the GE NM 530c because the field of view is fixed and at a constant distance from the scanner housing. Ex. 136 at SDML_00650608.

How the camera is acquiring larger patients?

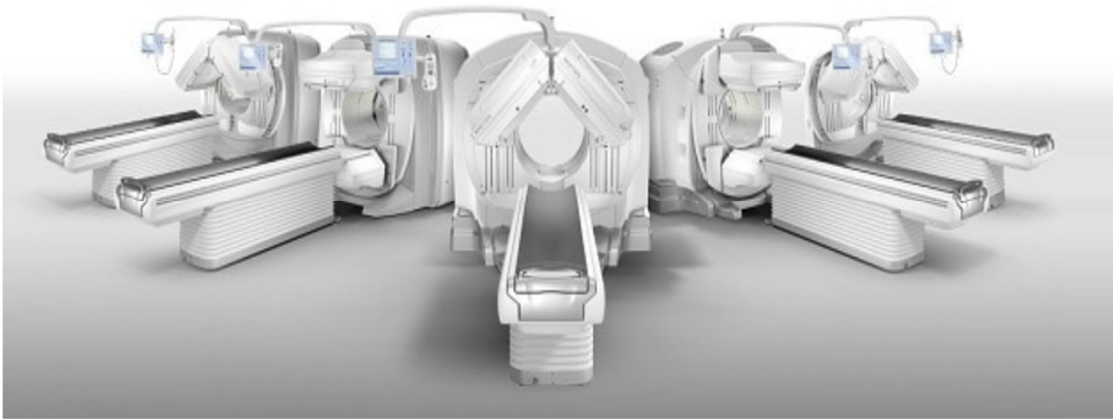


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C-1

Appendix D

Images of 800 Series (Ex. 137 at SDML_01279509)



Appendix E

Table Listing Attachments of February 27, 2013 Email from Riyadh Mahameed to Yariv Grobshtein (Ex. 45, GE_SDM_00297177-223) and Corresponding Spectrum Documents (Exs. 143, 144, 212-220)

Filename	Description	Bates number of Attachment	SDML Bates number
[REDACTED]	[REDACTED]	GE_SDM_00297208-213	SDML_00009898-903 (Ex. 144)
~\$A Reconstruction algorithm description.doc	Apparently, a cover page for something by Nathaniel Roth	GE_SDM_00297193-194	Information embedded in SDML_00032264-267 below (Ex. 212)
[REDACTED]	[REDACTED]	GE_SDM_00297206-207	SDML_00015221-222 (Ex. 143)
[REDACTED]	[REDACTED]	GE_SDM_00297222	SDML_00393039 (Ex. 213)
[REDACTED]	[REDACTED]	GE_SDM_00297223	SDML_00032416 (Ex. 214)
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	GE_SDM_00297219-221	SDML_00032214-216 (Ex. 216)
[REDACTED]	[REDACTED]	GE_SDM_00297179-184	SDML_00032206-211 (Ex. 217)
[REDACTED]	[REDACTED]	GE_SDM_00297195-201	SDML_00032452-458 (Ex. 218)
[REDACTED]	[REDACTED]	GE_SDM_00297185-192	SDML_00033523-530 (Ex. 219)
[REDACTED]	Different version than GE_SDM_00297219-221	GE_SDM_00297202-205	SDML_00032264-267 (Ex. 212)
[REDACTED]	Different version than GE_SDM_00297195-201 by Omer Ziv	GE_SDM_00297214-218	SDML_00015148-152 (Ex. 220)

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Appendix F

Table Listing Attachments of March 6, 2013 Email from Riyadh Mahameed to Yariv Grobshtein and Gil Kovalski (Ex. 100, GE_SDM_00127723-97) and Corresponding Spectrum Documents (Exs. 60, 62, 65, 66, 205-211)

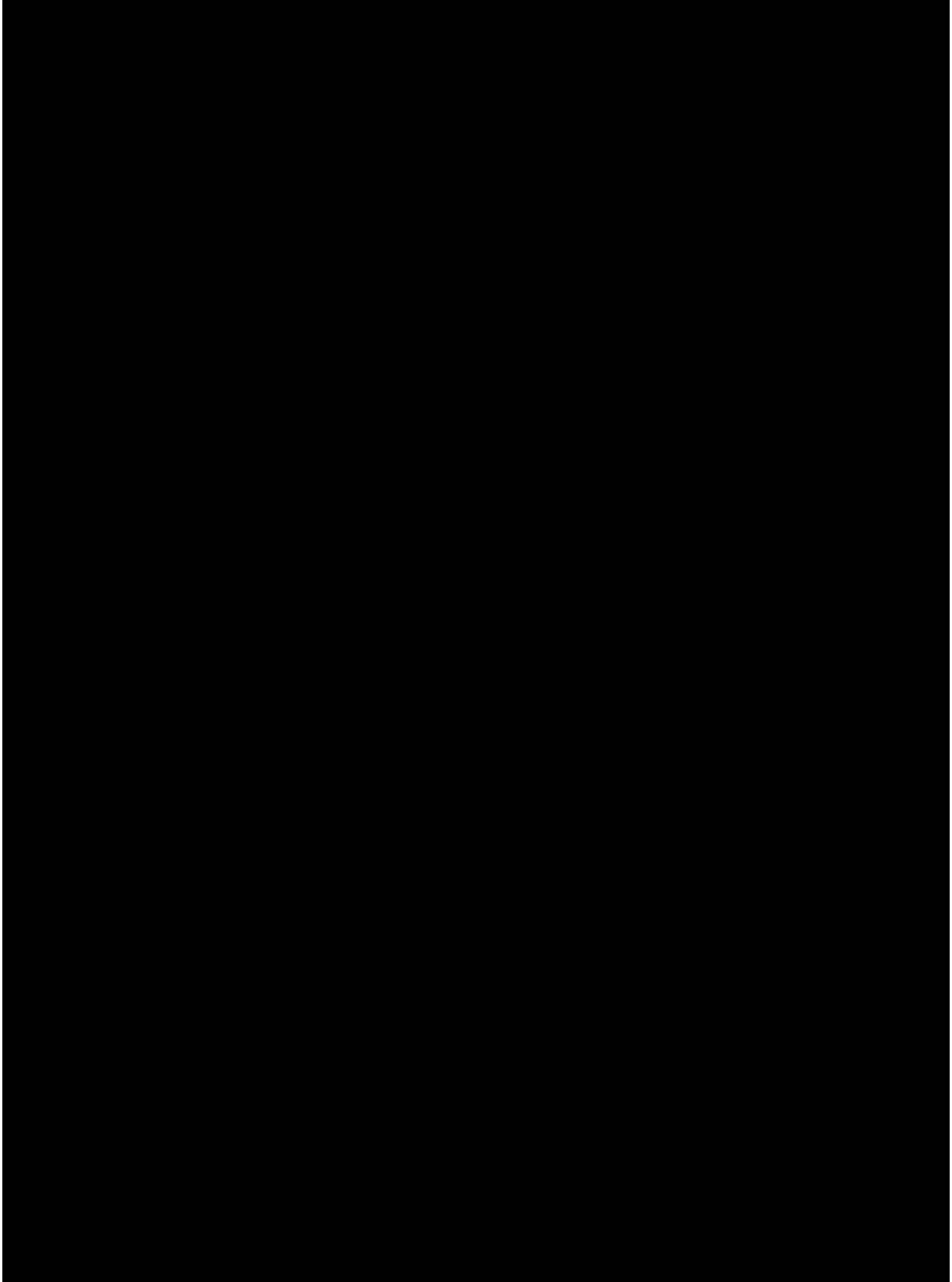
Filename	Description	Bates number of Attachment	SDML Bates number
Spectrum Dynamics - GPC Simulation.pdf	[REDACTED]	GE_SDM_00127755-779	SDML_01168792-816 (Ex. 60)
Yoel.msg	Emails between Nathaniel Roth and Floris Jansen marked as Confidential	GE_SDM_00127784-787	SDML_00038351-355 (Ex. 66)
RE_GPC Simulation.msg	Email of results and to setup phone conference	GE_SDM_00127752-753	SDML_00262801-802 (Ex. 205)
[REDACTED]	[REDACTED]	GE_SDM_00127726-728	SDML_00038321-323 (Ex. 62)
[REDACTED]	Email about results	GE_SDM_00127724-725	SDML_01169128-132 (Ex. 206)
[REDACTED]	Email about results	GE_SDM_00127780-781	SDML_01168658-659 (Ex. 207)
[REDACTED]	[REDACTED]	GE_SDM_00127791-796	SDML_00038345-50 (Ex. 65)
[REDACTED]	[REDACTED]	GE_SDM_00127797	No separate document, but same information

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Filename	Description	Bates number of Attachment	SDML Bates number
geometry confirmation.ppt^E xcel Chart.xls			embedded in SDML_00038345-50 above (Ex. 65)
RE_GPC Simulation.msg	Email about results	GE_SDM_00127751	SDML_00262880-881 (Ex. 208)
GPC Simulation.msg	Email about results	GE_SDM_00127754	SDML_01168791 (Ex. 60)
SPECTRUM DYNAMICS - GPC SIMULATION – NEW GE PHANTOM.pdf	Very similar to Spectrum Dynamics - GPC Simulation.pdf	GE_SDM_00127729-746	SDML_00038324-341 (Ex. 62)
██████████ ██████████	Email about simulations.	GE_SDM_00127782-783	SDML_01168576-577 (Ex. 209)
RE_Yoel.msg	██████████ ██████████████████ ██████████████████ ██████████████████ ██████████████████ ██████████████████ ██████████████████ ██████████████████ ██████████████████ ██████████████████	GE_SDM_00127788-790	SDML_00038342-344 (Ex. 65)
RE_GPC Simulation.msg	Email about simulations	GE_SDM_00127749-750	SDML_00263114-116 (Ex. 210)
RE_GPC Simulation.msg	Email about simulations	GE_SDM_00127747-748	SDML_01168941-945 (Ex. 211)

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Appendix G



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Appendix H

Getting GE Code Running

(Ex. 172, Email from Raz Carmi dated June 15, 2017, GE_SDM_00251386-498)

Summary:

I extracted all files in the email and placed them in the proper directory (Compact or Simulator). Depending on DISCO's process, the files were either download-able as text files (preferred) or PDF. When text, I pasted it into a blank file of the proper name. When PDF, I did the same, but some hand editing was needed because some of the text order was not preserved. This applied to only a few small files and I carefully checked for proper copying.

A minor issue is that DISCO's process inserted some blank lines in the process. There are a small number of [REDACTED] That is, multiple lines of text are to be treated as a single command. This is initiated by using three periods at the end of the line '...' to indicate that the next line is a continuation. This causes an error if there is an incorrectly inserted blank line; I removed those lines when necessary.

There are a few 'matrix' files that contain data. I was not able to extract them from DISCO since that data was turned into a PDF. I re-created the missing data using values I found in GE's files. In a couple cases that are unimportant, I needed to pick a value [REDACTED] [REDACTED] In one case, I had to deduce [REDACTED] what the proper intention was. This was [REDACTED] and was clear. I used the [REDACTED]

Detail:.

Copied at text from DISCO:

Simulator:

[REDACTED]
[REDACTED]

Compact:

[REDACTED]

Copied from PDF:

Simulator:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Compact:

[REDACTED]
[REDACTED]

Other Issues:

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[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Hand Edits

1. Line 196: deleted extra white-space line that caused continuation to fail.
2. Line 354 (original): deleted extra white-space line that caused continuation to fail.
3. Line 358 (original): deleted extra white-space line that caused continuation to fail.
4. Line 744 (original): deleted extra white-space line that caused continuation to fail.
5. Line 776 (original): deleted extra white-space line that caused continuation to fail.
6. Line 782 (original): deleted extra white-space line that caused continuation to fail.
7. Line 820 (original): deleted extra white-space line that caused continuation to fail.
8. Line 850 (original): deleted extra white-space line that caused continuation to fail.
9. Line 902 (original): deleted extra white-space line that caused continuation to fail.
10. Line 1000 (original): deleted extra white-space line that caused continuation to fail.
11. Line 1006 (original): deleted extra white-space line that caused continuation to fail.

1. Line 2: deleted extra white-space line that caused continuation to fail.
2. Line 90(original): deleted extra white-space line that caused continuation to fail.
3. Line 114(original): deleted extra white-space line that caused continuation to fail.
4. Line 140(original): deleted extra white-space line that caused continuation to fail.
5. Line 152(original): deleted extra white-space line that caused continuation to fail.
6. Line 162(original): deleted extra white-space line that caused continuation to fail.
7. Line 184(original): deleted extra white-space line that caused continuation to fail.
8. Line 210(original): deleted extra white-space line that caused continuation to fail.
9. Line 222(original): deleted extra white-space line that caused continuation to fail.
10. Line 232(original): deleted extra white-space line that caused continuation to fail.

1. Line 98: deleted extra white-space line that caused continuation to fail.
2. Line 100(original): deleted extra white-space line that caused continuation to fail.
3. Line 102(original): deleted extra white-space line that caused continuation to fail.
4. Line 104(original): deleted extra white-space line that caused continuation to fail.
5. Line 106(original): deleted extra white-space line that caused continuation to fail.
6. Line 108(original): deleted extra white-space line that caused continuation to fail.
7. Line 110(original): deleted extra white-space line that caused continuation to fail.
8. Line 116(original): deleted extra white-space line that caused continuation to fail.
9. Line 118(original): deleted extra white-space line that caused continuation to fail.
10. Line 120(original): deleted extra white-space line that caused continuation to fail.
11. Line 122(original): deleted extra white-space line that caused continuation to fail.
12. Line 124(original): deleted extra white-space line that caused continuation to fail.
13. Line 126(original): deleted extra white-space line that caused continuation to fail.
14. Line 128(original): deleted extra white-space line that caused continuation to fail.
15. Line 148(original): deleted extra white-space line that caused continuation to fail.
16. Line 156(original): deleted extra white-space line that caused continuation to fail.
17. Line 188(original): deleted extra white-space line that caused continuation to fail.
18. Line 196(original): deleted extra white-space line that caused continuation to fail.
19. Line 204(original): deleted extra white-space line that caused continuation to fail.
20. Line 214(original): deleted extra white-space line that caused continuation to fail.

visuDetReversGPC

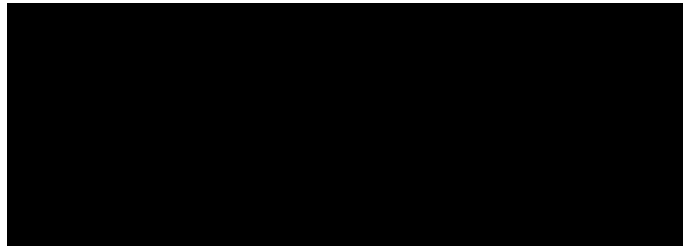
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1. Line 48: deleted extra white-space line that caused continuation to fail.

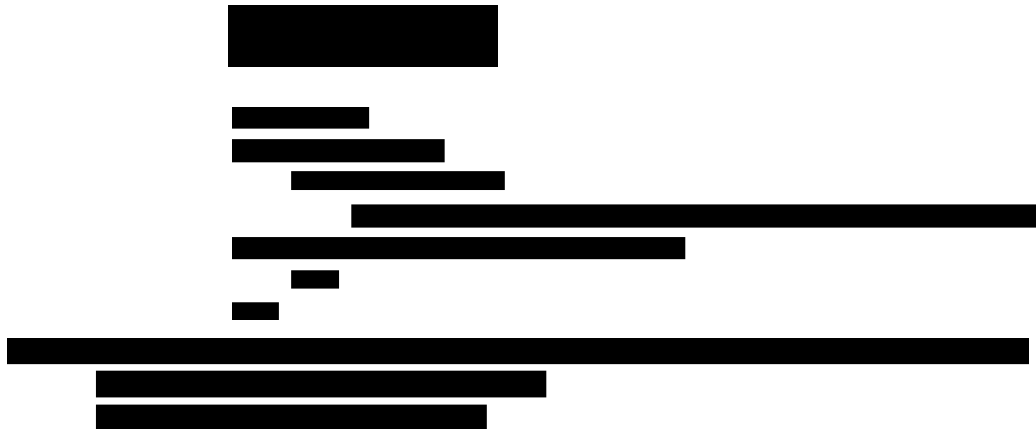
Modifications to the main script for Simulator:

1. Allow focus to move from center in lines 55-63:

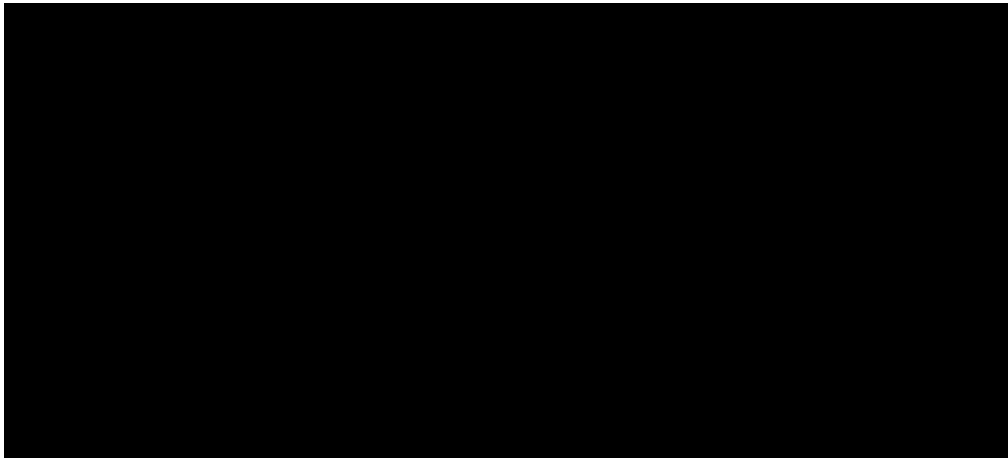
a. Old:



b. New:



Generation of [REDACTED] renamed 'Scott_syspar.mat':



Modifications to the main script for Compact: same as for simulator

Modifications to other code in Compact:

1. [REDACTED] Extra white-space lines were removed so that continuation lines functioned properly.

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2. [REDACTED] Extra white-space lines were removed so that continuation lines functioned properly.

Additions to data file 'Scott syspar.mat'

[REDACTED]

Appendix I**Index of Exhibits**

Exhibit Number	Description
5	Declaration of Nathaniel Roth dated August 26, 2021 in Support of Plaintiff's Motion for a Preliminary Injunction. (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
7	<i>Curriculum Vitae</i> for Scott D. Metzler, Ph.D. dated December 29, 2020.
8	Amended and Restated Mutual Confidentiality and Non-Use Agreement dated September 16, 2009 between Spectrum Dynamics Limited and GE Healthcare, Inc. (SDML_00032512-17). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
45	Email dated February 27, 2013 from Riyadh Mahameed (GE Healthcare) to Yariv Grobshtein (GE Healthcare) RE: Recon Info, please keep it for your eyes only including 12 attachments [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] (GE_SDM_00297177-223). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
48	GE Healthcare 510(k) Premarket Notification Submission - Section 12: Substantial Equivalence - StarGuide (GE_SDM_00440327-48). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
49	GE Healthcare 510(k) Premarket Notification Submission - Section 5: 510(k) Summary - Star Guide (GE_SDM_00440061-68). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
50	GE Healthcare 510(k) Premarket Notification Submission - Section 16: Software - StarGuide (GE_SDM_00440568-1068). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
51	PowerPoint presentation "Comparing DSPECT and UFC" dated December 22, 2020 (GE_SDM_00010974-81). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
52	Email dated April 23, 2009 from Reuven Brenner to Jean-Paul Bouhnik RE: Spotlight (containing in the chain an email dated April 22, 2009 from Reuven Brenner (GE Healthcare) to Nathan Hermony (GE Healthcare), Jean-Paul Bouhnik (GE Healthcare), and Erez Levy (GE Healthcare)) (GE_SDM_00108513-14). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
54	Email dated August 27, 2009 from Riyadh Mahameed (GE Healthcare) to Kristen A Wangerin (GE Research), Alexander Ganin (GE Healthcare), Floris P Jansen

Exhibit Number	Description
	(GE Research), Ravindra Manjeshwar (GE Healthcare), Nathan Hermony (GE Healthcare), Osnat Zak (GE Healthcare) and Jean-Paul Bouhmik (GE Healthcare) RE: CEOReview_Sept8_v7_without_YDUpdates.ppt including an attachment/NUC SII 2009 PowerPoint presentation (GE_SDM_00203614-22). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
55	Email dated September 16, 2009 from Jim Haisler to Yoel Zilberstien, Nathaniel Roth, Benny Rousso, and Gilad Yoeli Re: Agenda and Latest PPT Presentation For Today including 2 attachments "SD GE Agenda 9 16.docx" and [REDACTED] (SDML_01279739-807). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
56	Email dated October 11, 2009 from Jim Haisler to Yoel Zilberstien RE: Last GE presentation (SDML_00672946) including 4 attachments (Multi-purpose commercial camera-20090913.mpp (SDML_00672947-52); BroadView technology.mpg (SDML_00672953); [REDACTED] (SDML_00672954-3021) and GPC Concept Demo Video (SDML_00673024)). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
57	September 16, 2009 Transcript of Meeting (SDML_01605095-01605577). (CONFIDENTIAL)
58	Email dated February 26, 2010 from Yoel Zilberstien to Nathan Hermony Re: Emailing: Global presentation PART II including an attachment/PowerPoint presentation titled "A Paradigm Shift in Medical Imaging" and dated November 2009 (SDML_00700452-63). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
59	Email dated February 26, 2010 from Yoel Zilberstien to Nathan Hermony Re: Emailing GPC Concept Demo PART I (SDML_00038558) attaching GPC Concept Demo Video (SDML_00038559). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
60	Email dated August 16, 2010 from Nathaniel Roth to Floris Jansen (GE Global Research), Alexander Ganin (GE Healthcare), Jean-Paul Bouhnik (GE Healthcare), Yoel Zilberstien, Ran Ravhon, and Gilad Yoeli Re: GPC simulation including an attachment/PowerPoint presentation titled "Spectrum Dynamics GPC Simulations" (SDML_01168791-816). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
61	Email dated August 26, 2010 from Nathaniel Roth to Floris P Jansen (GE Global Research), Alexander Ganin (GE Healthcare), Jean-Paul Bouhnik (GE Healthcare), Ravindra Manjeshwar (GE Global Research), Yoel Zilberstien, Ran Ravhon, and Gilad Yoeli RE: GPC simulation (SDML_00263114-16). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
62	Email dated September 12, 2010 from Nathaniel Roth to Floris Jansen (GE Global Research), Alexander Ganin (GE Healthcare), Jean-Paul Bouhnik (GE Healthcare), Ravindra Manjeshwar (GE Global Research), Yoel Zilberstien, Ran Ravhon, and Gilad Yoeli RE: GPC Simulation including an attachment/PowerPoint presentation titled "Spectrum Dynamics GPC Simulations" (SDML_00038321-41). (HIGHLY CONFIDENTIAL-

Exhibit Number	Description
	ATTORNEYS' EYES ONLY)
63	Email dated September 13, 2010 from Nathan Hermony to Jean-Paul Bouhnik, Riyadh Mahameed, and Arie Eshco RE: GPC simulation (containing in the chain an email dated August 25, 2010 from Floris P Jansen (GE Global Research) to Nathaniel Roth, Alexander Ganin (GE Healthcare), Jean-Paul Bouhnik (GE Healthcare), Ravindra Manjeshwar (GE Global Research), Yoel Zilberstien, Ran Ravhon, and Gilad Yoeli RE: GPC simulation; and an email dated September 12, 2010 from Nathaniel Roth to Floris Jansen (GE Global Research), Alexander Ganin (GE Healthcare), Jean-Paul Bouhnik (GE Healthcare), Ravindra Manjeshwar (GE Global Research), Yoel Zilberstien, Ran Ravhon, and Gilad Yoeli RE: GPC simulation) (GE_SDM_00366546-49). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
64	Email dated August 3, 2010 from Jean-Paul Bouhnik to Yoel Zilberstien, Floris P Jensen, Alexander Ganin, and Shuchi Varandani RE: project data (containing in the chain an Email dated August 3, 2010 from Floris Jansen to Jean-Paul Bouhnik (GE Healthcare), Alexander Ganin (GE Healthcare), and Ravindra Manjeshwar (GE Global Research) RE: projection data including an attachment/PowerPoint presentation "Spotlight simulations – data conventions – August 2010" by Floris Jansen) (SDML_00733345-53). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
65	Email dated June 30, 2010 from Nathaniel Roth to Floris P Jansen (GE Research), Yoel Zilberstien, Jean-Paul Bouhnik (GE Healthcare), Alexander Ganin (GE Healthcare), and Shuchi Varandani (GE Healthcare) RE: Yoel including an attachment/PowerPoint presentation "Spotlight Simulations" dated June 2010 by Floris Jansen (SDML_00038342-50). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
66	Email dated July 4, 2010 from Nathaniel Roth to Floris P Jansen (GE Global Research), Yoel Zilberstien, Jean-Paul Bouhnik (GE Healthcare), Alexander Ganin (GE Healthcare), and Shuchi Varandani (GE Healthcare) RE: Yoel (SDML_00038351-55). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
69	Email dated September 20, 2010 from Floris P Jansen (GE Global Research) to Yoel Zilberstien, Alexander Ganin (GE Healthcare), Ravindra Manjeshwar (GE Global Research), Jean-Paul Bouhnik (GE Healthcare), Riyadh Mahameed (GE Healthcare), Suchi Varandani (GE Healthcare), and Nathan Hermony (GE Healthcare) RE: GPC Simulation (GE_SDM_00005088-92). (CONFIDENTIAL)
70	Email dated January 23, 2012 from William Burgman (GE Healthcare) to Nathan Hermony (GE Healthcare), Sabrina Solomon (GE Healthcare), Ehud Kogot (GE Healthcare), Bertrand Weil (GE Healthcare), Reuven Brenner (GE Healthcare), Arie Eshco (GE Healthcare), Riyadh Mahameed (GE Healthcare), Galia Pyura (GE Healthcare), Jacob Bachar (GE Healthcare), Dalit Sapir (GE Healthcare), Laurence Bigio (GE Healthcare), Ety Haver (GE Healthcare), Thomas Coleman (GE Healthcare), Raul Grable (GE Healthcare), Sergio Steinfeld (GE Healthcare), Mark D. Woods (GE Healthcare), Matan Beilin (GE Healthcare, consultant), Yossi Shmul (GE Healthcare), Janet Levy-Pahima, Moria Tam-Harshoshanim,

Exhibit Number	Description
	Yael Hauser, Ayelet Bar-on, Adi Nahmani, Nathaniel Roth, Roni Saati, Samy Bross, Jim Haisler, Yoel Zilberstien, Gilad Yoeli, yuris@medinvestgroup.com, sharona@gojisolutions.com RE: Spotlight - Onsite DD Agenda including an attachment/spreadsheet regarding Spotlight Onsite DD Agenda (SDML_00315379-81). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
72	Email dated February 14, 2012 from Nathaniel Roth to Riyadh Mahameed (GE Healthcare) and Yoel Zilberstien RE: Draft – Urgent including an attachment/PowerPoint presentation titled “GPC Clinical performances” (SDML_01180435-37). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
76	Email dated February 15, 2012 from Nathaniel Roth to Riyadh Mahameed (GE Healthcare) and Yoel Zilberstien RE: Draft – Urgent (SDML_00038490-91) including a GPC Alpha Demo video (SDML_00038492) and a PowerPoint Presentation titled “GPC Simulations work” (SDML_00038493-98). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
77	PowerPoint presentation titled “GPC Simulations - Update Meeting - November 15, 2012” (GE_SDM_00378712-46). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
78	Email dated January 31, 2012 from Nathaniel Roth to Aharon Peretz (GE Healthcare), Gilad Yoeli, William Burgman, Reuven Brenner (GE Healthcare), and Yoel Zilberstien RE: Emailing Spotlight DD Research.xlsx (SDML_00038465-66). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
79	Email dated February 3, 2013 from Nathan Hermony (GE Healthcare) to Arie Eshco (GE Healthcare), Reuven Brenner (GE Healthcare), and Riyadh Mahameed (GE Healthcare) RE: FW: Spotlight Update (GE_SDM_00133095-97). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
80	Calendar entry “GPC – review spotlight” meeting invitation organized by Einat Binyamin (GE Healthcare) for the meeting to occur on August 1, 2012 at 11:00am, requiring attendance of Jean-Paul Bouhnik (GE Healthcare), and Yariv Grobshtein (GE Healthcare). (GE_SDM_00127805). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
81	Email dated August 20, 2012 from Yariv Grobshtein to Riyadh Mahameed (GE Healthcare) Re: GPC – FW34 2012 including an attachment/PowerPoint presentation titled “Photon History Randomization” (GE_SDM_00254414-23). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
82	Email dated August 29, 2012 from Yariv Grobshtein (GE Healthcare) to Arie Eshco (GE Healthcare) and Riyadh Mahameed (GE Healthcare) RE: spotlight data room (GE_SDM_00128849). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
83	Email dated October 2, 2012 from Yariv Grobshtein (GE Healthcare) to Gil Kovalski (GE Healthcare) RE: recon time (GE_SDM_00376426). (HIGHLY

Exhibit Number	Description
	CONFIDENTIAL-ATTORNEYS' EYES ONLY)
84	Email dated October 28, 2012 from Einat Binyamin to Riyadh Mahameed, Jean-Paul Bouhnik, and Yariv Grobshtein RE Presentation for GPC update & feedback meeting including an attachment/PowerPoint presentation titled "Simulation Results Highlights" (GE_SDM_00203697-701). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
85	PowerPoint presentation "GPC Simulations - Update Meeting - November 15, 2012" (GE_SDM_00148801-34). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
86	Email dated December 11, 2012 from Jean-Paul Bouhnik to Einat Binyamin and Yariv Grobshtein RE: GPC Meeting (2) (containing in the chain an Email dated December 11, 2012 from Einat Binyamin (GE Healthcare) to Jean-Paul Bouhnik (GE Healthcare) and Yariv Grobshtein (GE Healthcare) RE: GPC Meeting (2)) (GE_SDM_00256150-51). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
87	Email dated January 27, 2013 from Arie Eshco to Jean-Paul Bouhnik RE: Kaz presentation including an attachment/PowerPoint presentation titled "GP CZT – "Stargate" Kickoff Workout Summary Jan 2013" by Arie Eshco (GE_SDM_00205102-56). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
88	Email dated October 29, 2012 from Yariv Grobshtein to Jean-Paul Bouhnik, Riyadh Mahameed, and Einat Binyamin RE: Presentation for GPC update & feedback meeting including an attachment/PowerPoint presentation titled "GPC Simulations - Update meeting - October 30, 2012" (GE_SDM_00254360-77). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
89	Email dated February 11, 2013 from Elias Shalabi to Einat Binyamin and Yariv Grobshtein RE: [REDACTED] (containing in the chain an Email dated February 11, 2013 from Einat Binyamin (GE Healthcare) to Elias Shalabi (GE Healthcare, consultant) and Yariv Grobshtein (GE Healthcare) RE: [REDACTED] (GE_SDM_00127798-99). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
90	Email dated February 13, 2013 from Jean-Paul Bouhnik to Einat Binyamin (GE Healthcare), Riyadh Mahameed (GE Healthcare), Yariv Grobshtein (GE Healthcare), Gil Kovalski (GE Healthcare), Sergio Steinfeld (GE Healthcare), Elias Shalabi (GE Healthcare, consultant) and Yulim Zingerman (GE Healthcare) RE: GPC Simulations (GE_SDM_00256146-47). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
91	Email dated March 22, 2016 from Arie Eshco to Doron Yahya, Yulim Zingerman, and Jean-Paul Bouhnik RE: consolidated presentation – Yulim + Arie's comments including an attachment/document titled "Organizational Chart – Stargate 2016" (GE_SDM_00113903-06). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
92	Email dated May 1, 2013 from Gil Kovalski to Jean-Paul Bouhnik, Arie Eshco,

Exhibit Number	Description
	Aharon Peretz, Riyadh Mahameed, Yigal Shrem, and Reuven Brenner RE: GPC workout including an attachment/PowerPoint presentation titled “Stargate workout – 3 year work plan” by Jean-Paul Bouhnik (GE_SDM_00204808-16). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
93	Email dated February 14, 2013 from Katharine Klein (GE Healthcare) to Arie Eshco (GE Healthcare), William Burgman (GE Healthcare), and Shuchi Varandani (GE Healthcare) RE: Spotlight – Internal NDA Lists 2009 – 2012 (GE_SDM_00003289-91) including 2 attachments/spreadsheets “Copy of Project Spotlight Confidentiality Agreement List” (GE_SDM_00032892) and “Spotlight Internal NDA List 2.12.13” (GE_SDE_00032893). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
94	Email dated February 4, 2013 from Jean-Paul Bouhnik (GE Healthcare) to Riyadh Mahameed (GE Healthcare) and Gil Kovalski (GE Healthcare) RE: GPCZT pal tool.doc including an attachment/Form related to Project named “General Purpose Gamma Camera based on plurality of detector heads” (GE_SDM_00300026-30). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
95	Email dated February 20, 2013 from Gil Kovalski to Arie Eshco (GE Healthcare), Riyadh Mahameed (GE Healthcare), Tzachi Rafaeli (GE Healthcare), Jean-Paul Bouhnik (GE Healthcare), Sergio Steinfeld (GE Healthcare), Roe Khen (GE Healthcare) and Aharon Peretz (GE Healthcare) RE: GP CZT Column diameter and Specs (GE_SDM_00205056-60). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
96	Email dated February 24, 2013 from Jean-Paul Bouhnik (GE Healthcare) to Reuven Brenner (GE Healthcare), Riyadh Mahameed (GE Healthcare) and Gil Kovalski (GE Healthcare) RE: recon (GE_SDM_00017481-82). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
97	Email dated June 24, 2010 from Alexander Ganin (GE Healthcare) to Floris P Jansen (GE Research), Shuchi Varandani (GE Healthcare) and Jean-Paul Bouhnik (GE Healthcare) RE: Yoel (GE_SDM_00012345-46). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
100	Email dated March 6, 2013 from Riyadh Mahameed to Yariv Grobshtein (GE Healthcare) and Gil Kovalski (GE Healthcare) Re: FW: GPC including 15 attachments (GE_SDM_00127723-97). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
101	Email dated December 5, 2015 from Jean-Paul Bouhnik (GE Healthcare) to Riyadh Mahameed (GE Healthcare) Re: last email from spectrum (GE_SDM_00133152) including an attachment/email dated September 15, 2010 from Yoel Zilberstien to Floris P Jensen and others regarding GPC simulation (GE_SDM_00133153-55). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
103	Spreadsheet file named “box_reorganization_15.4.2018.xlsx” (GE_SDM_00236172). (HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY)

Exhibit Number	Description
104	Email dated February 13, 2012 from Riyadh Mahameed (GE Healthcare) to Nathaniel Roth and Yoel Zilberstien RE: Draft – Urgent (SDML_00377339-41). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
105	Email dated February 14, 2012 from Nathaniel Roth to Riyadh Mahameed (GE Healthcare) and Yoel Zilberstien RE: Draft – Urgent (SDML_01275201-02) including an attachment/PowerPoint presentation “GPC simulations work” (SDML_01275203-07). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
106	Email dated February 15, 2012 from Riyadh Mahameed (GE Healthcare) to Nathaniel Roth and Yoel Zilberstien RE: Draft – Urgent (SDML_01180486). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
107	Email dated February 15, 2012 from Riyadh Mahameed (GE Healthcare) to Nathaniel Roth, Lana Volokh (GE Healthcare), and Yoel Zilberstien RE: GPC Acceptance (SDML_00377560) including an attachment/PowerPoint presentation “GPC Clinical Performance Requirements” (SDML_00377561-63). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
108	Email dated June 13, 2013 from Einat Binyamin (GE Healthcare) to Jean-Paul Bouhnik (GE Healthcare) re: Counts & more (GE_SDM_00204311). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
109	Email dated June 23, 2013 from Einat Binyamin (GE Healthcare) to Jean-Paul Bouhnik (GE Healthcare) RE: Counts & more (GE_SDM_00204276). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
110	Spreadsheet named “Column requirements01.xlsx” (GE_SDM_00194604). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
117	Emailed dated April 24, 2018 from Netanella Didi to Jonathan Sachs, Raz Carmi, Michael Wilk, Yariv Grobshtein, Shai Wald, Michal Merman, Michael Gaisinsky, Adi Sharon, Ayelet Barak, Idan Cohen, and Gali Avital Re: FW: Uploading SG folders to Box including an attachment/spreadsheet named “box-reorganiztion_24.4.2018.xlsx” (GE_SDM_00249996-98). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
118	Email dated November 25, 2019 from Yariv Grobshtein (GE Healthcare) to Jonathan Sachs (GE Healthcare) RE: Comparison of simulations to physical acquisitions (GE_SDM_00377195-96). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
119	Meeting Invite dated May 7, 2013 from Jean-Paul Bouhnik to Roei Khen, Yulim Zingerman, Ofir Amzaleg, Gil Amisar, Tzachi Rafaeli, Riyadh Mahameed, Sergio Steinfeld, Yigal Shrem, Leonid Tsukerman, Yariv Grobshtein, Einat Binyamin, Uri Sneh, Ilan Levin, Nati Herman, Arie Eshco, Dalit Sapir, Galia Pyura, Michael Gaisinsky, Sharon Ben-Shabat, Dmitri Diment, Tal Bresler, Reuven Brenner, Aharon Peretz, Gil Kovalski, and Aharon Peretz Re: GPC workout including an attachment/PowerPoint presentation “Stargate - Master Plan Workout - April 29, 2013” (GE_SDM_00230528-33). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)

Exhibit Number	Description
120	Email dated April 30, 2013 from Yulim Zingerman to Sergio Steinfeld Re: NM Technology Trends_Example – Riyad.docx including an attachment/document titled “NM Technology Trends - April 21, 2013” by Chief Engineer Riyad Mahameed (GE_SDM_00230902-40). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
121	Email dated May 5, 2011 from Nathaniel Roth to Yoel Zilberstien, Albert Cogan, Baha Elden Kassem, Sajed Haj-Yahya, Adi Nahmani, Dan Samak, Ran Ravhon, Samy Bross, Rafael Baavour, and Dalia Shiti RE: GPC system PDR – meetin gsummary (3/5/2011) including an attachment/document regarding “GPC – Meeting Sumary – System PDR – 20110503” (SDML_00845881-84). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
122	Email dated January 28, 2013 from Sergio Steinfeld (GE Healthcare) to Ilan Levin (GE Healthcare), Michael Gaisinsky (GE Healthcare), Roe Khen (GE Healthcare), and Jean-Paul Bouhnik (GE Healthcare) RE: Sweep Stepper Motor Preliminary Spec and including an attachment/spreadsheet named “GPZCT Motion.xlsx” (GE_SDM_00205098-99). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
123	Meeting invite dated Feb 10, 2013 and organized by Michael Gaisinsky to Jean-Paul Bouhnik, Ilan Levin, Uri Sneh, Yariv Grobshtein, Riyad Mahameed, Ofir Amzaleg, Sergio Steinfeld, Yigal Shrem, and Tzachi Rafaeli Re: GPczt Software/Hardware status update including 3 attachments containing diagrams and a document titled “FW’06 SW & HW Status Update” (GE_SDM_00244936-39). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
129	Email dated June 1, 2015 from Nathaniel Roth to Baha Elden Kassem Re: GPC design justification including an attachment/document titled “GPC - Design justification” (SDML_01278776-95). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
130	Email dated September 7, 2009 from Shuchi Varandani (GE Helathcare) to Yoel Zilberstien and Jim Haisler RE: Meeting with SD (SDML_00667196-97). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
131	PowerPoint Presentation “D-SPECT system” (SDML_01167709-21). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
132	Video file named “VID-20171018-WA0007.mp4” (GE_SDM_00220577). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
133	Stargate Gantry ME DDR Video dated July 2019 (GE_SDM_00154502). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
135	Email dated May 19, 2013 from Eli Werner (GE Healthcare) to Arie Eshco (GE Healthcare) and Jean-Paul Bouhnik (GE Healthcare) RE: For your URGENT review including an attachment/document titled “New Era of NM IQ & Patient Management” (GE_SDM_00204615-37). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
136	PowerPoint Presentation “GE Alcyone Multi-Pinholes SPECT” (SDML_00650605-12). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)

Exhibit Number	Description
	ONLY)
137	GE Healthcare Web Article: “Cardiac Imaging” printed March 18, 2021 (https://www.gehealthcare.com/products/molecular-imaging/nuclear-medicine/cardiac-imaging) (SDML_01279503-10).
141	PowerPoint Presentation “Non Cardiac imaging with D-SPECT & GPC Feasibility Prototype” (SDML_01055100-31). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
142	Email dated August 3, 2010 from Jean-Paul Bouhnik to Yoel Zilberstien, Floris P Jansen, Alexander Ganin, and Shuchi Varandani RE: project data (containing in the chain an email dated August 3, 2010 from Floris Jansen to Jean-Paul Bouhnik (GE Healthcare), Alexander Ganin (GE Healthcare), and Ravindra Manjeshwar (GE Global Research) Re: projection data) including an attachment/PowerPoint presentation “Spotlight simulations – data conventions – August 2010” by Floris Jansen (SDML_0073345-53). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
143	Memorandum dated December 14, 2006 from Haim to Eli, Leonid, Tali, Adi, Nathaniel, Samy, and Omer Re: Eli’s Scan Pattern Documentation (SDML_00015221-22). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
144	Document titled “New Scramble Method - Algorithm Development report” by Ravhon Ran (SDML_00009898-903). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
145	Gambhir et al., A Novel High-Sensitivity Rapid-Acquisition Single-Photon Cardiac Imaging Camera, <i>J Nucl Med</i> , 50:635-643 (2009) (GE_SDM_00392950-59).
146	Slomka et al., New Cardiac Cameras: Single-Photon Emission CT and PET, <i>Semin Nucl Med</i> , 44:232-251 (2014) (GE_SDM_00389457-76).
148	E.G. DePuey, <i>Journal of Nuclear Cardiology</i> , vol. 19(3), pp. 551-581, 2012 (SDML_00321587-619).
149	PowerPoint Presentation “Atlantis - Stargate with ultra high sensitivity” (GE_SDM_00166492-502). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
150	GE Healthcare 510(k) Premarket Notification Submission - Section 13: Proposed Labeling - StarGuide (GE_SDM_00440349-556). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
152	GE Healthcare 510(k) Premarket Notification Submission - Section 18: Performance Testing-Bench - StarGuide (GE_SDM_00441071-175). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
153	Email dated October 11, 2009 from Shuchi Varandani to Reuven Brenner (GE Healthcare), Floris Jansen (GE Research), Riyadh Mahameed (GE Healthcare), and Jean-Paul Bouhnik (GE Healthcare) RE: Spotlight (GE_SDM_00366502). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)

Exhibit Number	Description
154	Email dated August 1, 2010 from Alexander Ganin (GE Healthcare) to Jean-Paul Bouhnik (GE Healthcare), Floris Jansen (GE Global Research), Riyad Mahameed (GE Healthcare), Nathan Hermony (GE Healthcare), Aharon Peretz (GE Healthcare), Osnat Zak (GE Healthcare), Reuven Brenner (GE Healthcare), Tzachi Rafaeli (GE Healthcare), Terri Bresenham (GE Healthcare, GE Officer), and Shuchi Varandani (GE Healthcare) RE: spotlight visit – review of simulation (GE_SDM_00005376-77). (HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY)
155	Document titled “Spotlight Technology evaluation” by Floris Jansen, Chief Scientist, Imaging Systems, GE Global Research, dated August 12, 2010 (GE_SDM_00366578-80). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
156	Video file named “GPC_Linear_original.mp4” (SDML_01055537). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
157	Email dated July 30, 2012 from Einat Binyamin to Gil Kovalski (GE Healthcare) and Yariv Grobshtein (GE Healthcare) Re: Stargate (GE_SDM_00241753). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
158	Email dated May 8, 2013 from Jean-Paul Bouhnik to Leonid Tsukerman, Michael Kogan, Ormit Amir, Tzachi Rafaeli, Yulim Zingerman, and Yariv Grobshtein RE: Weekly Physics’ “Happy hour” including an attachment/spreadsheet “collimator design for GPC.xlsx” (GE_SDM_00241609-10). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
159	Spreadsheet file named “collimator design for GPC July31 – Copy.xlsx” (GE_SDM_00194077). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
160	Email dated December 3, 2013 from Jean-Paul Bouhnik to Leonid Tsukerman (GE Healthcare), Gil Kovalski (GE Healthcare), Michael Kogan (GE Healthcare), and Yulim Zingerman (GE Healthcare). RE: D-SPECT collimator including an attachment/article – Erlandsson et al., <i>Phys. Med. Biol.</i> , 54:2635-2649 (2009) (GE_SDM_00286271-86). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
161	Email dated June 20, 2010 from Jean-Paul Bounik (GE Healthcare) to Alexander Ganin (GE Healthcare), Floris Jansen (GE Research), Riyad Mahameed (GE Healthcare), Nathan Hermony (GE Healthcare), Reuven Brenner (GE Healthcare), Arie Eshco (GE Healthcare), and Shuchi Varandani (GE Healthcare) Re: spotlight technology – few input collected during the last day (GE_SDM_00005708). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
162	Email dated June 24, 2014 from Jean-Paul Bouhnik to Yariv Grobshtein including an attachment/spreadsheet file named “collimator design for GPC may2014.xlsx” (GE_SDM_00286071-72). (HIGHLY CONFIDENTIAL-ATTORNEYS’ EYES ONLY)
163	Spreadsheet file named “collimator design for GPC may2014.xlsx”

Exhibit Number	Description
	(GE_SDM_00285191). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
164	Email dated December 6, 2015 from Jean-Paul Bouhnik (GE Healthcare) to Riyadh Mahameed (GE Healthcare) (GE_SDM_00201234) including an attachment/spreadsheet named "collimator design for GPC august 2014.xlsx" (GE_SDM_00201235). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
165	Email dated December 6, 2015 from Jean-Paul Bouhnik to Riyadh Mahameed including an attachment/PowerPoint Presentation "Developer Survival Landscape" (GE_SDM_00201236-41). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
166	Email dated December 21, 2015 from Riyadh Mahameed to Yariv Grobshtein and Jean-Paul Bouhnik Re: Initial thoughts on IQ plan including an attachment/PowerPoint presentation "Gaps v. MD" (GE_SDM_00206272-80). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
167	PowerPoint Presentation "GP CZT – "Stargate", GPC Tech Review, Jan. 2013" by Jean-Paul Bouhnik (GE_SDM_00194918-52). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
168	Calendar entry for March 18, 2013 Meeting: "Stargate – continue discussion" organized by Gil Kovalski (GE Healthcare) for the required attendees: Jean-Paul Bouhnik (GE Healthcare), Kevin M. Boyle (GE Healthcare), Riyadh Mahameed (GE Healthcare), and Aharon Peretz (GE Healthcare) (GE_SDM_00049934-35). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
169	PowerPoint Presentation "GPC – Image Quality Survey" (GE_SDM_00148763-78). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
170	PowerPoint Presentation "GP CZT – "Stargate", GPC Tech Review, Jan 2013" by Jean-Paul Bouhnik (GE_SDM_00195273-334). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
171	Power Point Presentation titled "GE Healthcare - Nuclear Medicine Review" (GE_SDM_00139821-40). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
172	Email dated June 15, 2017 from Raz Carmi (GE Healthcare) to Pavel Livshits (GE Healthcare), Yariv Grobstein (GE Healthcare), Shai Wald (GE Healthcare), and Jonathan Sachs (GE Healthcare) RE: Stargate scan plan – Matlab code for implementation (GE_SDM_00251386) including attachments containing Stargate Scan Plan – Matlab code (text file inserted for pages marked with "Technical Issue – Unable to Image") (GE_SDM_00251386-498). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
173	PowerPoint Presentation "What Next in NM - Feb. 2013" by Riyadh Mahameed (GE_SDM_00374179-207). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
174	Spreadsheet named "Copy of GPC GE only.xls" (GE_SDM_00195104).

Exhibit Number	Description
	(HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
175	Email dated November 7, 2018 from Hadas Kosovezer (GE Healthcare) to Jean-Paul Bouhnik (GE Healthcare) and Gil Kovalski (GE Healthcare) RE: Stargate axial length analysis (GE_SDM_00313871-72, 74) including an attachment/spreadsheet re "Stargate requirements_2013_08_01.xlsx" (GE_SDM_00313873). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
176	Spreadsheet file named "Copy of Stargate requirements.xlsx" (GE_SDM_00194844). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
177	Email dated August 7, 2013 from Gil Kovalski to Jean-Paul Bouhnik and Aharon Peretz RE: GE Libraries: Recommended File – FW3213_Stargate_Meeting_Minutes (GE_SDM_00204111-14) including an attachment/spreadsheet "Stargate requirements.xlsx" (GE_SDM_00204115). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
178	Email dated August 8, 2013 from Gil Kovalski to Aharon Peretz, Jean-Paul Bouhnik and Arie Eshco RE: Stargate sync – will send you the file for review shortly (GE_SDM_00204105) including an attachment/spreadsheet "Stargate requirements.xlsx" (GE_SDM_00204106). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
179	Email dated August 11, 2013 from Gil Kovalski to Aharon Peretz, Jean-Paul Bouhnik and Arie Eshco RE: Stargate content (GE_SDM_00204100) including an attachment/spreadsheet "Stargate requirements.xlsx" (GE_SDM_00204101). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
180	Email dated August 11, 2013 from Gil Kovalski to Aharon Peretz, Jean-Paul Bouhnik and Arie Eshco RE: Stargate content (GE_SDM_00204103) including an attachment/spreadsheet "Copy of Stargate requirements.xlsx" (GE_SDM_00204104). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
181	Email dated August 14, 2013 from Aharon Peretz to Kevin M Boyle, Gil Kovalski, Jean-Paul Bouhnik, and Arie Eshco RE: GE Libraries: Recommended File – FW3213_Stargate_Meeting_Minutes (GE_SDM_00204096-98) including an attachment/spreadsheet "Stargate requirements.xlsx" (GE_SDM_00204099). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
182	Email dated July 3, 2018 from Jean-Paul Bouhnik to Reuven Brenner RE: FW Stargate content (GE_SDM_00319563-64) including an attachment/spreadsheet file named "Stargate requirements.xlsx" (GE_SDM_00319565). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
183	Email dated August 19, 2013 from Yariv Grobshtein to Jean-Paul Bouhnik RE: Stargate content (GE_SDM_00254147) including an attachment/spreadsheet "Stargate requirements – Recon inputs.xlsx" (GE_SDM_00254148). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
184	PowerPoint Presentation "GP CZT – "Stargate" - GPC Tech Review - Jan. 2013"

Exhibit Number	Description
	by Jean-Paul Bouhnik (GE_SDM_00194852-79). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
185	Email dated December 1, 2013 from Jean-Paul Bouhnik to Oren Saban (GE_SDM_00203516) including an attachment/PowerPoint Presentation "GP CZT – "Stargate" - GPC Tech Review - Jan. 2013" by Jean-Paul Bouhnik (GE_SDM_00203517-45). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
186	PowerPoint Presentation "GP CZT – "Stargate" - GPC Tech Review - Jan. 2013" by Jean-Paul Bouhnik (GE_SDM_00195200-28). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
189	Email dated January 5, 2017 from Arie Eshco to Jean-Paul Bouhnik RE: FW: Stargate WF animation (GE_SDM_00225120) including an attachment/video "stargate_ep01_preview_12.wmv" (GE_SDM_00225121). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
190	Calendar entry "FW: Lempax quote review" meeting invitation organized by Galia Pyura (GE Healthcare) for the meeting to occur on April 16, 2015 at 12:00 pm, requiring attendance of Yovav Elul, Jack Luo, Israel Altman, Nati Bloch-Damti, and Reuven Brenner including attachments/email/drawings (except for STEP native files since they cannot be opened) (GE_SDM_00304084-85, 87-89, 91, 92, 96-98, 100, 102). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
191	PowerPoint Presentation "General Purpose system - Develop mechanisms" (GE_SDM_00485235-57). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
192	Spreadsheet file named "NM Tracers rev 6.5.xlsx" (GE_SDM_00552761). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
193	PowerPoint presentation "Stargate NM Gantry - Suspended Mass Analysis - DOC2385623" dated May 2020 (GE_SDM_00140283-358). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
194	Email dated October 13, 2016 from Roei Erlich to Gilad Indig, Alon Bendor, Doron Yahya, and Jean-Paul Bouhnik RE: missing data or open issues HW related including an attachment/document titled "SCM - Stepper Controller & Motor - Electronics Specifications", Initial Version: October 2016 Rev.6.0 (GE_SDM_00212696-729). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
195	PowerPoint Presentation "GPC Simulations - Update meeting - October 30, 2012" (GE_SDM_00235099-115). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
196	Email dated February 13, 2013 from Gil Kovalski (GE Healthcare) to Einat Binyamin (GE Healthcare), Riyad Mahameed (GE Healthcare), Yariv Grobshtein (GE Healthcare), Jean-Paul Bouhnik (GE Healthcare), Sergio Steinfeld (GE Healthcare), Elias Shalabi (GE Healthcare, consultant), and Yulim Zingerman (GE Healthcare) RE: GPC Simulations (GE_SDM_00256144-45). (HIGHLY

Exhibit Number	Description
	CONFIDENTIAL-ATTORNEYS' EYES ONLY)
197	PowerPoint Presentation "GE Healthcare - Nuclear Medicine Growth Play Book - March 2009" (GE_SDM_00292337-81). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
198	GE document titled "Alcyone Technology - White Paper" (GE_SDM_00286665-71) (with text file inserted under each page due to illegibility of the document). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
199	Email dated November 25, 2009 from Ravindra Manjeshwar (GE Research) to Alexander Ganin (GE Healthcare), Lana Volokh (GE Healthcare), Yigal Shrem (GE Healthcare), Jonathan Sachs (GE Healthcare), Jean-Paul Bouhnik (GE Healthcare), Ira Blevis (GE Healthcare), Leonish Tsukerman (GE Healthcare), Osnat Zak (GE Healthcare), Riyadh Mahameed (GE Healthcare), Aharon Peretz (GE Healthcare), Sinan Awad (GE Healthcare), Kristen A (GE Research), Jorge Uribe (GE Research), Evren Asma (GE Research), Hua Qian (GE Research), Sergei Dolinsky (GE Research), Floris P Jansen (GE Research) Yanfeng Du (GE Research), and Jeffrey S Gordon (GE Research) RE: Notes from Nuc Brainstorming session (GE_SDM_00286375-76) including 5 attachments/presentations (GE_SDM_00286377-381, 385-403). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
200	Email dated September 25, 2009 from Nathan Hermony to Riyadh Mahameed, Jean-Paul Bouhnik, and Erez Levy RE: FW: GP simulations 3 including an attachment/PowerPoint Presentation titled "GP simulations" (GE_SDM_00286577-97). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
202	Email dated January 6, 2009 from Floris Jansen, Yigal Shrem, Ira Blevis, Lana Volokh, James Hugg, Leonid Tsukerman, Jean-Paul Bouhnik, Yariv Grobshtein, Reuven Brenner, Alexander Ganin, Girish Bal RE: Plan + results including an attachment/presentation "GRC SPECT Tasks for '09" (GE_SDM_00286734-41). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
203	Email dated June 22, 2014 from Yariv Grobshtein (GE Healthcare) to Einat Binyamin (GE Healthcare) and Gil Kovalski (GE Healthcare) RE: Female 50 new axial division (GE_SDM_00254108-09). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
204	Discovery NM 530c Data Sheet (GE_SDM_00328143-48). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
205	Email dated August 25, 2010 from Nathaniel Roth to Floris Jensen, Alexander Ganin, Jean-Paul Bouhnik, Ravindra Manjeshwar, Yoel Zilberstien, Ran Ravhon, and Gilad Yoeli RE: GPC simulation (SDML_00262801-02). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
206	Email dated September 14, 2010 from Nathaniel Roth to Floris Jensen, Yoel Zilberstien, Alexander Ganin, Ravindra Manjeshwar, Nathan Hermony, Jean-Paul Bouhnik, Riyadh Mahameed, Ran Ravhon, and Gilad Yoeli RE: GPC simulation (SDML_01169128-32). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES

Exhibit Number	Description
	ONLY)
207	Emailed dated August 10, 2010 from Nathaniel Roth to Floris Jensen and Jean-Paul Bouhnik RE: GPC simulation (SDML_01168658-59). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
208	Email dated August 25, 2010 from Nathaniel Roth to Floris Jensen, Alexander Ganin, Jean-Paul Bouhnik, Ravindra Manjeshwar, Yoel Zilberstien, Ran Ravhon, and Gilad Yoeli RE: GPC simulation (SDML_00262880-81). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
209	Emailed dated August 4, 2010 from Nathaniel Roth to Jean-Paul Bouhnik, Floris Jensen and Alexander Ganin RE: GPC simulation (SDML_01168576-77). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
210	Email dated August 26, 2010 from Nathaniel Roth to Floris Jensen, Alexander Ganin, Jean-Paul Bouhnik, Ravindra Manjeshwar, Yoel Zilberstien, Ran Ravhon, and Gilad Yoeli RE: GPC simulation (SDML_00263114-16). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
211	Emailed dated August 31, 2010 from Nathaniel Roth to Floris Jensen, Jean-Paul Bouhnik, Ravindra Manjeshwar and Ran Ravhon RE: GPC simulation (SDML_01168941-45). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
212	Document titled "reconstruction algorithm description of d-spect" (SDML_00032264-67). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
213	Document titled "Bad Pixels Identification – Application: D-SPECT" by Ran Ravhon (SDML_00393039). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
214	Spreadsheet file named "3.B reconstruction parameter.xls" (SDML_00032416). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
215	Spreadsheet file named "3.B1 reconstruction parameters.xls" (SDML_00032415). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
216	Document titled "reconstruction algorithm - description of d-spect" (SDML_00032214-16). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
217	PowerPoint presentation "D-Spect Reconstruction" (SDML_00032206-11). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
218	Document titled "Efficient Gated Reconstruction - Application: D-SPECT" written by Ran Ravhon (SDML_00032452-458). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
219	PowerPoint Presentation "D-SPECT: Bad Pixel Effect" (SDML_00033523-30). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)
220	Document titled "Efficient Gated Reconstruction - Application: D-SPECT" written by Omer Ziv (SDML_00015148-52). (HIGHLY CONFIDENTIAL-

Exhibit Number	Description
	ATTORNEYS' EYES ONLY)
222	PowerPoint presentation titled "GPC Simulations - Update Meeting - November 15, 2012" (GE_SDM_00378678-711). (HIGHLY CONFIDENTIAL-ATTORNEYS' EYES ONLY)